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SEARCH REQUEST FORM

Date: 1/21/2000 Requester's Full Name: SABITA GAZI Examiner #: _____
Art Unit: 1616 Phone (305) _____ Serial Number: 09/448,356
Results Format Preferred (circle): PAPER DISK E-MAIL

To ensure an efficient and quality search, please attach a copy of the cover sheet, claims, and abstract or fill out the following:

Title of Invention: _____

Inventors (please provide full names): Carl Burdick et al.

Earliest Priority Date: EPO 98/22412.4 11/26/98

Search Topic:

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known.

For Sequence Searches Only Please include all pertinent information (parent, grandchild, divisional, or issued patent numbers) along with the appropriate serial number.

ch-1-13

① Phytosterol and/or phytostanol + polyunsaturated fatty acid

↓
Phytosterol and/or phytostanol ester

② Composition for lowering serum cholesterol & triglyceride levels for with phytosterols and/or phytostanols

STAFF USE ONLY

Searcher: JOHN DANILZMAN Type of Search

NA Sequence (#)

AA Sequence (#)

2 Structure (#)

Bibliographic

Litigation

Fulltext

Other

Online Time: 50

Vendors and Cost

STN _____ Dialog

Questel/Orbit _____ Dr. Link

Lexis/Nexis _____ Westlaw

WWW/Internet

In-house sequence systems (list)

Other (specify)

=> D L11 BIB ABS HITSTR

L11 ANSWER 1 OF 4 HCAPLUS COPYRIGHT 2000 ACS

AN 1997:780363 HCAPLUS

DN 128:162760

TI Increased cellular triglyceride levels in human monocytic and rat smooth muscle cells after lovastatin

AU Hrboticky, Nina; Becker, Alexander; Kruse, Hans-Joachim; Weber, Peter C.

CS Pettenkoferstrasse 9, Institut fur Prophylaxe und Epidemiologie der Kreislaufkrankheiten, Ludwig-Maximilians Universitat, Munchen, 80336, Germany

SO Biochim. Biophys. Acta (1997), 1349(3), 211-221
CODEN: BBACAQ; ISSN: 0006-3002

PB Elsevier Science B.V.

DT Journal

LA English

AB .beta.-Hydroxy-.beta.-methyl-glutaryl-CoA (HMG-CoA) reductase inhibitors reduce plasma LDL **cholesterol** by upregulating hepatic LDL receptors. However, their effects on lipid metab. in extrahepatic cells may also contribute to their therapeutic benefit. The authors examd. the effects of lovastatin (LOV) on cellular lipid levels in the human monocytic Mono Mac 6sr and cultured rat smooth muscle cells. In both

cell types, LOV produced a dose-dependent increase in cellular triglycerides. This increase was obsd. in cells grown in the absence of exogenous lipids in the culture medium, but was more pronounced after addns. of oleic acid (50 to 200 .mu.M) and VLDL (50 to 200 .mu.g/mL). In Mono Mac 6sr cells grown in medium contg. 10 delipidated FCS for the last 16 h, the LOV-induced rise in triglyceride levels was completely reversed by 2 mM mevalonic acid and was assocd. with a decrease in cellular **cholesterol**. However, when cells were maintained in lipoprotein-replete medium, the LOV-induced rise in triglycerides did not correlate with cellular **cholesterol**. LOV also reduced cellular **cholesterol** esterification and increased the synthesis of **fatty** acids and their incorporation into triglycerides and phospholipids. Increased triglyceride levels were also seen in Mono Mac 6sr cells treated with the **lanosterol** demethylase inhibitor RS-21607 and the acylCoA:**cholesterol** acyltransferase inhibitor SaH 58035. The authors findings suggest that the LOV-induced

triglyceride accumulation involves changes in intracellular **cholesterol** pools regulating cellular **fatty** acid concns. Although decreased **cholesterol** levels in cells participating in plaque formation are beneficial, the impact of the herein described shift in intracellular neutral lipid metab. on other cellular functions warrants further investigation.

IT 75330-75-5, Lovastatin

RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(increased cellular triglyceride levels in human monocytic and rat smooth muscle cells after lovastatin in relation to **cholesterol** and **fatty** acid metab. and lipoprotein levels)

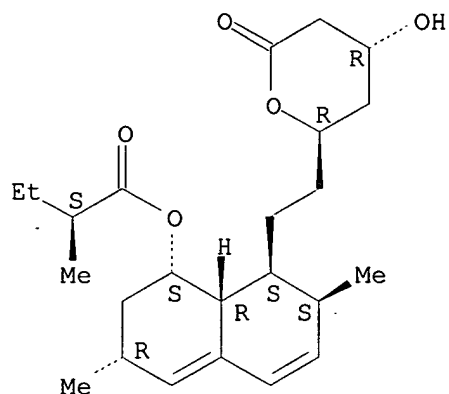
RN 75330-75-5 HCAPLUS

CN Butanoic acid, 2-methyl-, (1S,3R,7S,8S,8aR)-1,2,3,7,8,8a-hexahydro-3,7-dimethyl-8-[2-[(2R,4R)-tetrahydro-4-hydroxy-6-oxo-2H-pyran-2-yl]ethyl]-1-

Searched by John Dantzman 308-4488

naphthalenyl ester, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



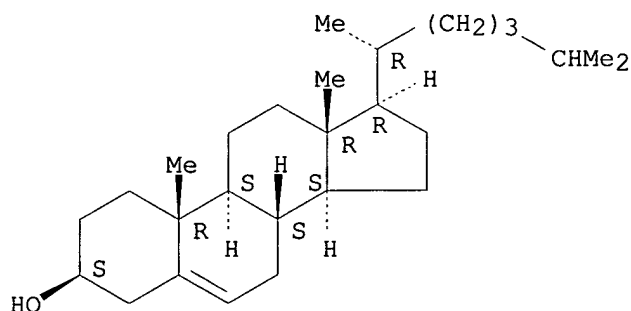
IT 57-88-5, Cholesterol, biological studies

RL: BPR (Biological process); BIOL (Biological study); PROC (Process) (increased cellular triglyceride levels in human monocytic and rat smooth muscle cells after lovastatin in relation to **cholesterol** and **fatty** acid metab. and lipoprotein levels)

RN 57-88-5 HCAPLUS

CN Cholest-5-en-3-ol (3.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 9028-35-7, .beta.-Hydroxy-.beta.-methylglutaryl-CoA reductase

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibitors; increased cellular triglyceride levels in human monocytic
and rat smooth muscle cells after lovastatin in relation to
cholesterol and **fatty** acid metab. and lipoprotein
levels)

RN 9028-35-7 HCAPLUS

CN Reductase, hydroxymethylglutaryl coenzyme A (reduced nicotinamide adenine dinucleotide phosphate) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

=> D L11 BIB ABS HITSTR 2

L11 ANSWER 2 OF 4 HCAPLUS COPYRIGHT 2000 ACS

AN 1997:143092 HCAPLUS

DN 126:261101

TI [3-13C] .gamma.-linolenic acid: a new probe for 13C nuclear magnetic resonance studies of arachidonic acid synthesis in the suckling rat

AU Cunnane, S.C.; Moine, G.; Likhodil, S.S.; Vogt, J.; Corso, T.N.;

Brenna, J.T.; Demneltair, H.; Koletzko, B.; Tovar, K.-H.; et al.

CS Department of Nutritional Sciences, Faculty of Medicine, University of Toronto, Toronto, M5S 3E2, Can.

SO Lipids (1997), 32(2), 211-217

CODEN: LPDSAP; ISSN: 0024-4201

PB AOCS Press

DT Journal

LA English

AB Our objective was to develop a suitable probe to study metab. of polyunsatd. **fatty** acids by 13C NMR in the suckling rat pup.

[3-13C] .gamma.-Linolenic acid was chem. synthesized, and a 20 mg or 5 mg dose was injected into the stomachs of 6-10-day-old suckling rat pups

that

were then killed over a 192 h (8 d) time course. 13C NMR showed that 13C in .gamma.-linolenate peaked in liver total lipids by 12-h post-dosing

and

that [5-13C]-arachidonic acid peaked in both brain and liver total lipids 48-96 h post-dosing. 13C enrichment in brain .gamma.-linolenic acid was not detected by NMR, but gas chromatog.-combustion-isotope ratio mass spectrometry showed that its mass enrichment in brain phospholipids at 48-96 h post-dosing was 1-2% of that in brain arachidonic acid: 13C was present in liver and brain **cholesterol** and in perchloric acid extractable water-sol. metabolites in the brain, liver and carcass. We conclude that low but measurable amts. of exogenous .gamma.-linolenic

acid

do access the suckling rat brain in vivo. The slow time course of

[5-13C]

arachidonic acid appearance in the brain suggests most of it was probably transported there after synthesis elsewhere, probably in the liver. Some carbon from .gamma.-linolenic acid is also incorporated into lipid products other than n-6 long-chain polyunsatd. **fatty** acids.

IT 57-88-5, **Cholesterol**, analysis

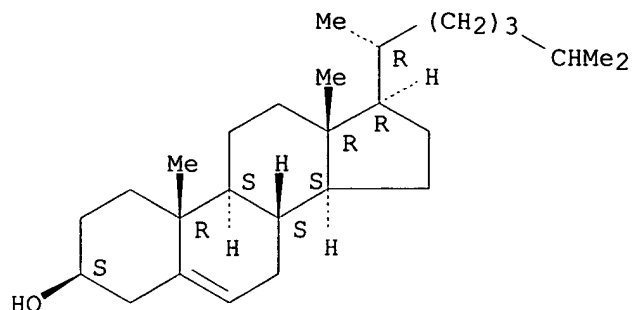
RL: AMX (Analytical matrix); ANST (Analytical study)

([3-13C] .gamma.-linolenic acid as new probe for 13C NMR studies of arachidonic acid synthesis in suckling rat)

RN 57-88-5 HCAPLUS

CN Cholest-5-en-3-ol (3.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



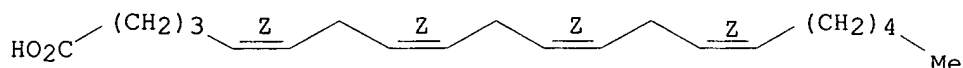
IT 506-32-1, Arachidonic acid

RL: ANT (Analyte); MFM (Metabolic formation); ANST (Analytical study);
BIOL (Biological study); FORM (Formation, nonpreparative)
([3-13C] .gamma.-linolenic acid as new probe for 13C NMR studies of
arachidonic acid synthesis in suckling rat)

RN 506-32-1 HCAPLUS

CN 5,8,11,14-Eicosatetraenoic acid, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



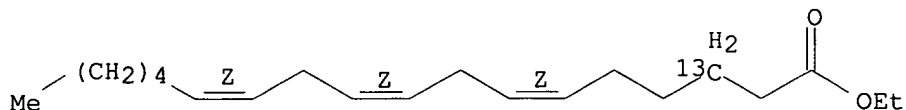
IT 188751-51-1P

RL: ARU (Analytical role, unclassified); NUU (Nonbiological use,
unclassified); SPN (Synthetic preparation); ANST (Analytical study); PREP
(Preparation); USES (Uses)
([3-13C] .gamma.-linolenic acid as new probe for 13C NMR studies of
arachidonic acid synthesis in suckling rat)

RN 188751-51-1 HCAPLUS

CN 6,9,12-Octadecatrienoic-3-13C acid, ethyl ester, (all-Z)- (9CI) (CA
INDEX NAME)

Double bond geometry as shown.



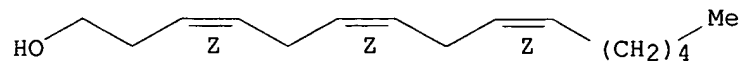
IT 120379-61-5

RL: RCT (Reactant)
([3-13C] .gamma.-linolenic acid as new probe for 13C NMR studies of
arachidonic acid synthesis in suckling rat)

RN 120379-61-5 HCAPLUS

CN 3,6,9-Pentadecatrien-1-ol, (Z,Z,Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



IT 21232-75-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
([3-¹³C] .gamma.-linolenic acid as new probe for ¹³C NMR studies of
arachidonic acid synthesis in suckling rat)

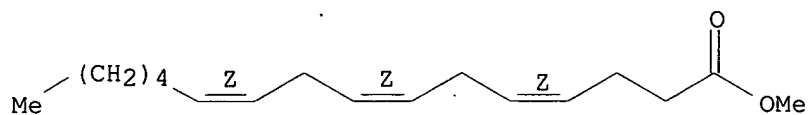
RN 21232-75-7 HCAPLUS

CN 4,7,10-Hexadecatrienoic acid, methyl ester, (Z,Z,Z)- (8CI, 9CI) (CA

INDEX

NAME)

Double bond geometry as shown.



=> D L11 BIB ABS HITSTR 3

L11 ANSWER 3 OF 4 HCAPLUS COPYRIGHT 2000 ACS

AN 1994:235858 HCAPLUS

DN 120:235858

TI Lovastatin increases arachidonic acid levels and stimulates thromboxane synthesis in human liver and monocytic cell lines

AU Hrboticky, N.; Tang, L.; Zimmer, B.; Lux, I.; Weber, P. C.

CS Inst. Prophylaxe Epidemiol. Kreislaufkrankheiten, Univ. Muenchen, Muenchen,

80336, Germany

SO J. Clin. Invest. (1994), 93(1), 195-203

CODEN: JCINAO; ISSN: 0021-9738

DT Journal

LA English

AB The effect of lovastatin (LOV), the inhibitor of 3-hydroxy-3-methyl-glutaryl CoA reductase, on linoleic acid (LA, 18:2n-6) metab. was examd. in human monocytic Mono Mac 6 (MM6) and hepatoma Hep G2 cells. The desatn. of LA was examd. after LOV (72 h, 10 .mu.M) or dimethylsulfoxide (LOV carrier, <0.1%) and [14C]LA (last 18 h, 0.3 .mu.Ci, 5 .mu.M). In both cell lines, LOV reduced the percentage of 14C label assocd. with LA and increased the percentage of label in the 20:4n-6 and the 22:5n-6 fractions. In Hep G2 but not MM6 cells, this effect was fully reversible by means of coincubation with mevalonic acid (500 .mu.M), but not with **cholesterol** or lipoproteins. In both cell lines, the LOV-mediated increase in LA desatn. resulted in dose-dependent redns. of LA and elevations of arachidonic acid (AA) in cellular phospholipids. The lipids

secreted by LOV-treated Hep G2 cells were also enriched in AA. In the MM6

cells, LOV increased release of thromboxane upon stimulation with the calcium ionophore A23187. In summary, the authors' findings of higher LA desatn. and AA enrichment of lipids secreted by the Hep G2 cells suggest that LOV treatment may increase the delivery of AA from the liver to extrahepatic tissues. The changes in membrane **fatty** acid compn. can influence a variety of cellular functions, such as eicosanoid synthesis in monocytic cells. The mechanism appears to be related to the reduced availability of intermediates of cholesterologenesis.

IT 57-88-5, **Cholesterol**, biological studies

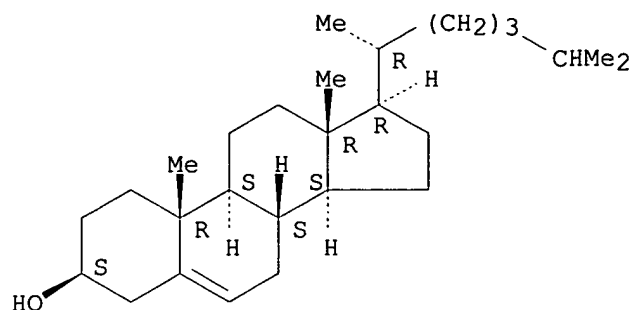
RL: BIOL (Biological study)

(Lovastatin effect on cellular content of, as HMGCoA reductase inhibitor, in human liver)

RN 57-88-5 HCAPLUS

CN Cholest-5-en-3-ol (3.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 57-10-3, C16:0, biological studies 57-11-4, C18:0,
 biological studies 506-32-1, Arachidonic acid 1783-84-2
 , C20:3n-6 6217-54-5, C22:6n-3 10417-94-4, C20:5n-3
 24880-45-3, C22:5n-3 25182-74-5, C22:5n-6
 27104-13-8, C18:1 28874-58-0, C22:4n-6

RL: BIOL (Biological study)

(Lovastatin effect on phospholipid, as HMGCoA reductase inhibitor, in
 human liver and monocytic cell lines)

RN 57-10-3 HCAPLUS

CN Hexadecanoic acid (9CI) (CA INDEX NAME)

HO₂C- (CH₂)₁₄-Me

RN 57-11-4 HCAPLUS

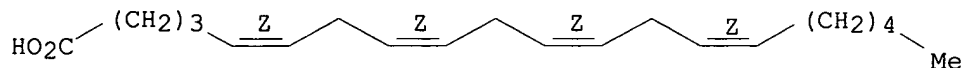
CN Octadecanoic acid (9CI) (CA INDEX NAME)

HO₂C- (CH₂)₁₆-Me

RN 506-32-1 HCAPLUS

CN 5,8,11,14-Eicosatetraenoic acid, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)

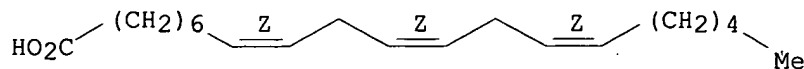
Double bond geometry as shown.



RN 1783-84-2 HCAPLUS

CN 8,11,14-Eicosatrienoic acid, (8Z,11Z,14Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



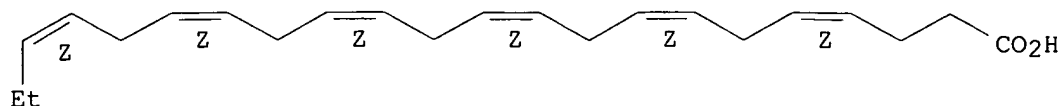
RN 6217-54-5 HCAPLUS

Searched by John Dantzman

308-4488

CN 4,7,10,13,16,19-Docosahexaenoic acid, (4Z,7Z,10Z,13Z,16Z,19Z)- (9CI) (CA INDEX NAME)

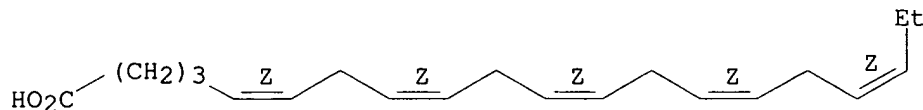
Double bond geometry as shown.



RN 10417-94-4 HCAPLUS

CN 5,8,11,14,17-Eicosapentaenoic acid, (5Z,8Z,11Z,14Z,17Z)- (9CI) (CA INDEX NAME)

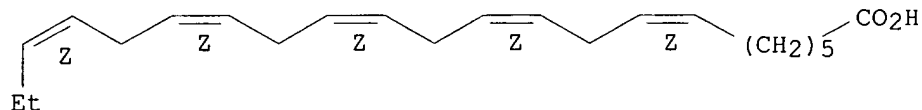
Double bond geometry as shown.



RN 24880-45-3 HCAPLUS

CN 7,10,13,16,19-Docosapentaenoic acid, (7Z,10Z,13Z,16Z,19Z)- (9CI) (CA INDEX NAME)

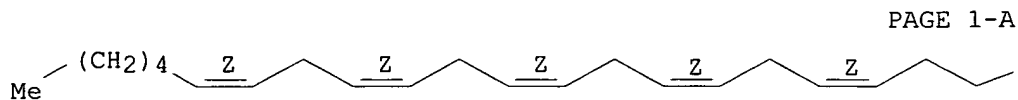
Double bond geometry as shown.



RN 25182-74-5 HCAPLUS

CN 4,7,10,13,16-Docosapentaenoic acid, (4Z,7Z,10Z,13Z,16Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



PAGE 1-A

PAGE 1-B

CO₂H

RN 27104-13-8 HCAPLUS

CN Octadecenoic acid, (Z)- (8CI, 9CI) (CA INDEX NAME)

CM 1

Searched by John Dantzman

308-4488

CRN 57-11-4
CMF C18 H36 O2

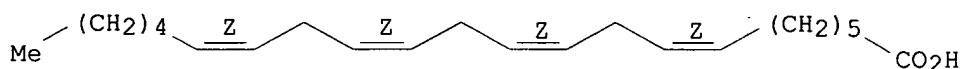
$$\text{HO}_2\text{C}-(\text{CH}_2)_{16}-\text{Me}$$

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RN      28874-58-0  HCAPLUS
CN      7,10,13,16-Docosatetraenoic acid, (7Z,10Z,13Z,16Z)- (9CI)  (CA INDEX
NAME)

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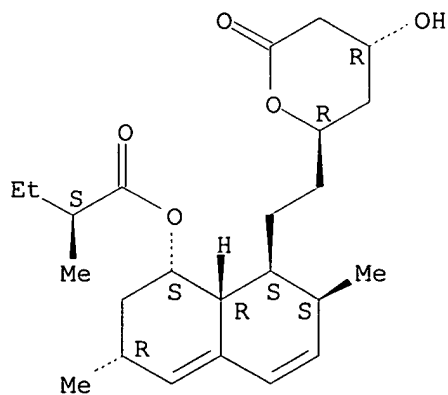
Double bond geometry as shown.



IT 75330-75-5, Lovastatin
RL: BAC (Biological activity or effector, except adverse); THU
(Therapeutic use); BIOL (Biological study); USES (Uses)
(anticholesteremic activity of, as HMGCoA reductase inhibitor,
linoleic acid pharmacokinetics in relation to, in human liver and monocytic
cell lines)

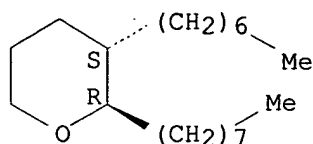
RN 75330-75-5 HCAPLUS
CN Butanoic acid, 2-methyl-, (1S,3R,7S,8S,8aR)-1,2,3,7,8,8a-hexahydro-3,7-dimethyl-8-[2-[(2R,4R)-tetrahydro-4-hydroxy-6-oxo-2H-pyran-2-yl]ethyl]-1-naphthalenyl ester, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT	66719-58-2, Thromboxane
	RL: FORM (Formation, nonpreparative)
	(formation of, lovastatin stimulation of, as HMGCoA reductase inhibitor)
RN	66719-58-2 HCAPLUS
CN	2H-Pyran, 3-heptyltetrahydro-2-octyl-, (2R,3S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 9028-35-7, HMGCoA reductase

RL: BIOL (Biological study)

(inhibition of, by Lovastatin, linoleic acid pharmacokinetics response to, in human liver and monocytic cell lines)

RN 9028-35-7 HCAPLUS

CN Reductase, hydroxymethylglutaryl coenzyme A (reduced nicotinamide adenine dinucleotide phosphate) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

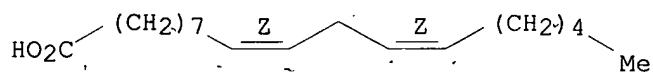
IT 60-33-3, Linoleic acid, biological studies

RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(pharmacokinetics of, Lovastatin effect on, as HMGCoA reductase inhibitor, in human liver and monocytic cell lines)

RN 60-33-3 HCAPLUS

CN 9,12-Octadecadienoic acid (9Z,12Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



=> D L11 BIB ABS HITSTR 4

L11 ANSWER 4 OF 4 HCAPLUS COPYRIGHT 2000 ACS

AN 1988:489393 HCAPLUS

DN 109:89393

TI Polyterpenoids as **cholesterol** and tetrahymanol surrogates in the ciliate *Tetrahymena pyriformis*

AU **Raederstorff, Daniel**; Rohmer, Michel

CS Ec. Natl. Super Chim. Mulhouse, Mulhouse, F-68093, Fr.

SO Biochim. Biophys. Acta (1988), 960(2), 190-9

CODEN: BBACAQ; ISSN: 0006-3002

DT Journal

LA English

AB The tetracyclic **sterol** precursors, cyclolaudenol, cycloartenol and **lanosterol**, inhibit efficiently the tetrahymanol biosynthesis in the ciliate *T. pyriformis*, as reported earlier for **cholesterol** and other **sterols**. The prokaryotic bacteriohopanetetrols have little effect, and diplopterol, another hopanoid, as well as the carotenoid, canthaxanthin, have no effect. In the presence of triparanol, a **hypocholesterolemic** drug inhibiting the squalene cyclase of *T. pyriformis* and modifying the **fatty** acid metab., the cells do not grow further, but growth can be restored by the addn. to the culture medium of suitable polyterpenoids.

Thus, growth in presence of triparanol (13 .mu.M) is almost normal after addn. of a **sterol** such as **sitosterol** and cyclolaudenol, and longer lag times and lower absorbances than those of untreated cultures are obsd. in presence of cyclartenol, **lanosterol**, euphenol (a **lanosterol** isomer), bacteriohopanetetrols and 3 carotenoids. No growth at all is obsd. in the presence of tetrahymanol and diplopterol, although these triterpenoids are the normal reinforcers of the ciliate, probably because of a poor bioavailability. Thus, structurally different polyterpenoids are (at least partially) functionally equiv. and capable of replacing tetrahymanol

or **sterols** and might act as membrane reinforcers in *T. pyriformis* cells.

IT 2130-17-8, Tetrahymanol

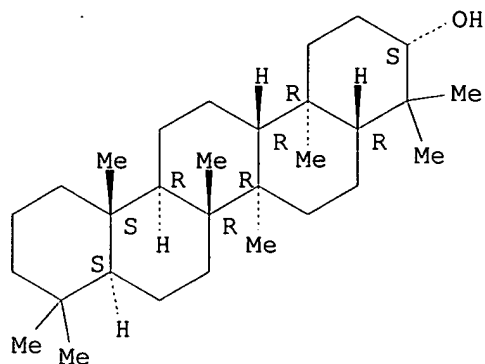
RL: BIOL (Biological study)

(of *Tetrahymena pyriformis*, polyterpenoids and triparanol effect on)

RN 2130-17-8 HCAPLUS

CN Gammaceran-3-ol, (3.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



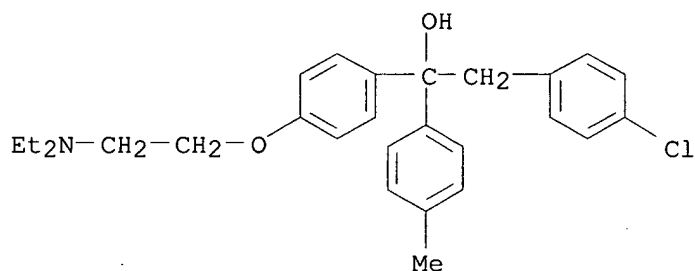
IT 78-41-1, Triparanol

RL: BIOL (Biological study)

(*Tetrahymena pyriformis* growth response to polyterpenes and)

RN 78-41-1 HCAPLUS

CN Benzeneethanol, 4-chloro-.alpha.-[4-[2-(diethylamino)ethoxy]phenyl]-
.alpha.-(4-methylphenyl)- (9CI) (CA INDEX NAME)



IT 79-63-0, Lanosterol 83-46-5 469-38-5

511-61-5 514-78-3, Canthaxanthin 564-60-3,

Euphenol 1721-59-1, Diplopterol 7235-40-7,

.beta.-Carotene 101528-35-2 115795-44-3

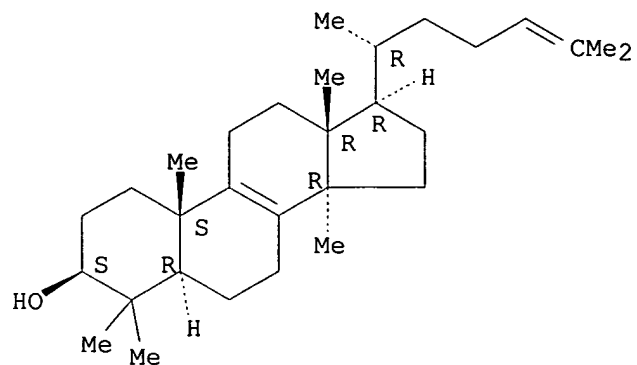
RL: BIOL (Biological study)

(*Tetrahymena pyriformis* growth response to triparanol and)

RN 79-63-0 HCAPLUS

CN Lanosta-8,24-dien-3-ol, (3.beta.)- (9CI) (CA INDEX NAME)

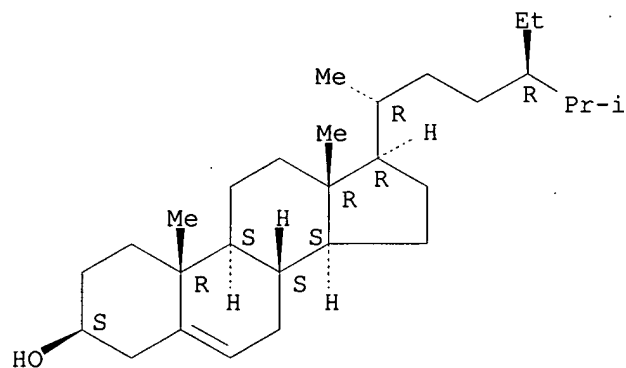
Absolute stereochemistry.



RN 83-46-5 HCAPLUS

CN Stigmast-5-en-3-ol, (3.beta.)- (9CI) (CA INDEX NAME)

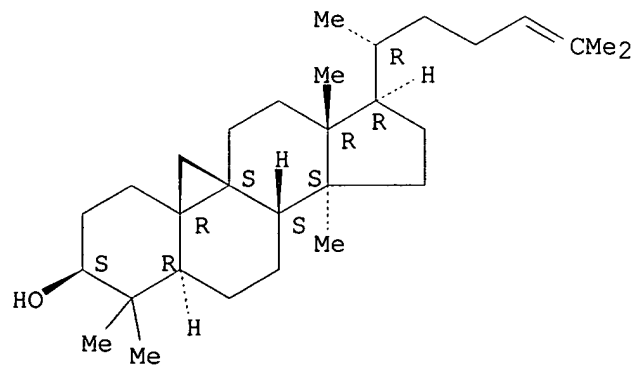
Absolute stereochemistry.



RN 469-38-5 HCAPLUS

CN 9,19-Cyclolanost-24-en-3-ol, (3.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



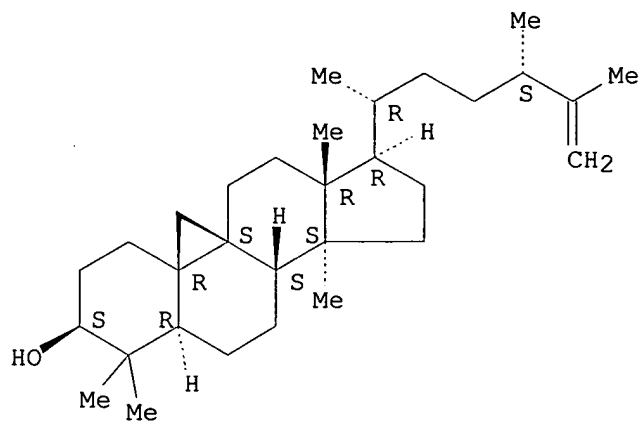
RN 511-61-5 HCAPLUS

Searched by John Dantzman

308-4488

CN 9,19-Cyclolanost-25-en-3-ol, 24-methyl-, (3.beta.,24S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

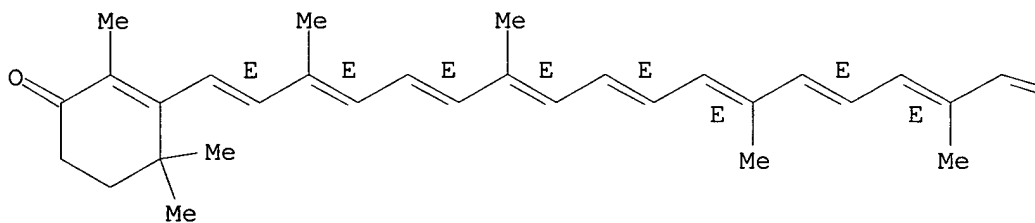


RN 514-78-3 HCAPLUS

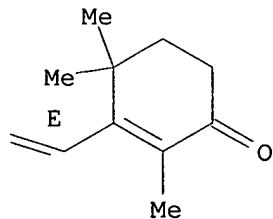
CN .beta.,.beta.-Carotene-4,4'-dione (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A



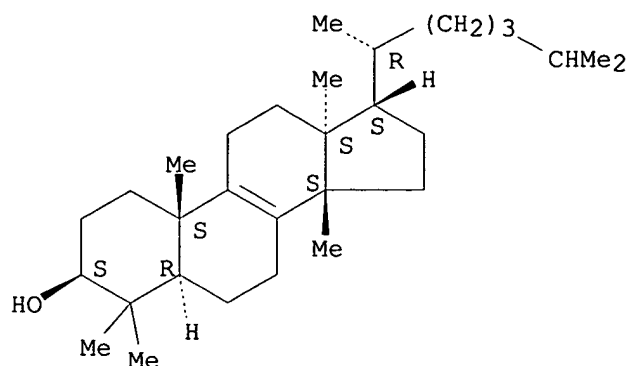
PAGE 1-B



RN 564-60-3 HCAPLUS

CN Lanost-8-en-3-ol, (3.beta.,13.alpha.,14.beta.,17.alpha.)- (9CI) (CA INDEX NAME)

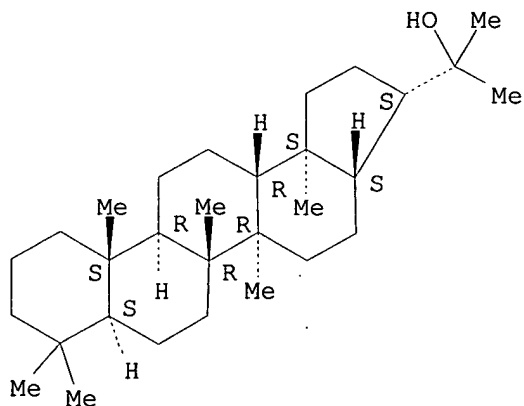
Absolute stereochemistry.



RN 1721-59-1 HCAPLUS

CN A'-Neogammaceran-22-ol (7CI, 8CI, 9CI) (CA INDEX NAME)

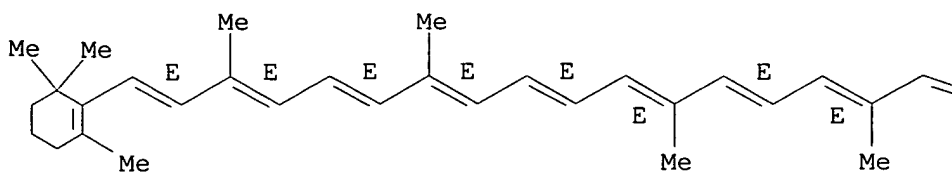
Absolute stereochemistry.



RN 7235-40-7 HCAPLUS

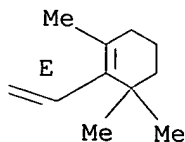
CN .beta.,.beta.-Carotene (9CI) (CA INDEX NAME)

Double bond geometry as shown.



PAGE 1-A

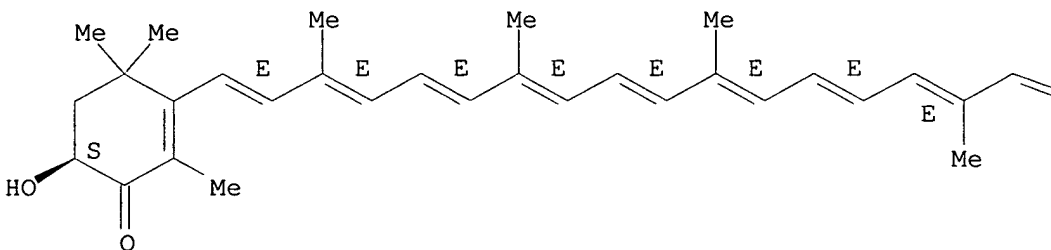
PAGE 1-B



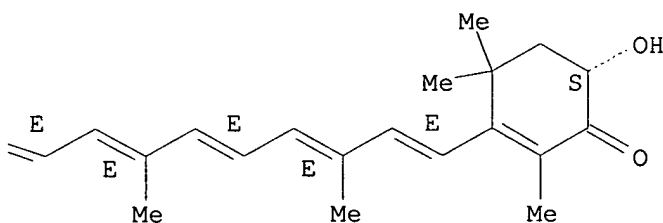
RN 101528-35-2 HCAPLUS
 CN 2-Cyclohexen-1-one,
 3,3'-[(1E,3E,5E,7E,9E,11E,13E,15E,17E,19E,21E,23E,25E)-
 3,7,11,16,20,24-hexamethyl-1,3,5,7,9,11,13,15,17,19,21,23,25-
 hexacosatridecaene-1,26-diyl]bis[6-hydroxy-2,4,4-trimethyl-, (6S,6'S)-
 (9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry as shown.

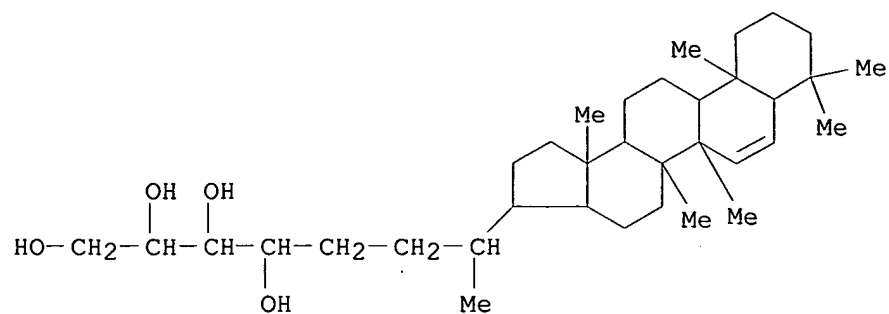
PAGE 1-A



PAGE 1-B



RN 115795-44-3 HCAPLUS
 CN 1,2,3,4-Octanetetrol, 7-[(21.alpha.)-A'-neo-22,29,30-trinorgammacer-6-en-
 21-yl]-, [2S-(2R*,3S*,4S*,7S*)]- (9CI) (CA INDEX NAME)



=> D HIS

(FILE 'HOME' ENTERED AT 07:14:12 ON 16 FEB 2000)

FILE 'HCAPLUS' ENTERED AT 07:18:31 ON 16 FEB 2000

L1 96 S BURDICK D?/AU
L2 16 S MOINE G?/AU
L3 21 S RAEDERSTORFF D?/AU
L4 801 S WEBER P?/AU
L5 0 S L1 AND L2 AND L3 AND L4
L6 934 S L1-L5
L7 0 S L6 AND (PHYTOSTEROL OR PHYTOSTANOL)
L8 19 S L6 AND ?STEROL?
L9 4 S L8 AND (FATTY OR EICOSAPENT? OR DOCOSAHEXA?)
SELECT RN L9 1-4

FILE 'REGISTRY' ENTERED AT 07:20:21 ON 16 FEB 2000

L10 30 S E1-30

FILE 'HCAPLUS' ENTERED AT 07:20:31 ON 16 FEB 2000

L11 4 S L9 AND L10

FILE 'REGISTRY' ENTERED AT 07:23:32 ON 16 FEB 2000

E .BETA.-SITOSTEROL/CN
L12 1 S .BETA.-SITOSTEROL/CN
E STIGMASTEROL/CN
L13 1 S STIGMASTEROL/CN
E CAMPESTEROL/CN
L14 1 S CAMPESTEROL/CN

FILE 'HCAPLUS' ENTERED AT 07:35:49 ON 16 FEB 2000

Inventor Search

=> D HIS

(FILE 'HOME' ENTERED AT 07:14:12 ON 16 FEB 2000)

FILE 'HCAPLUS' ENTERED AT 07:18:31 ON 16 FEB 2000

L1 96 S BURDICK D?/AU
L2 16 S MOINE G?/AU
L3 21 S RAEDERSTORFF D?/AU
L4 801 S WEBER P?/AU
L5 0 S L1 AND L2 AND L3 AND L4
L6 934 S L1-L5
L7 0 S L6 AND (PHYTOSTEROL OR PHYTOSTANOL)
L8 19 S L6 AND ?STEROL?
L9 4 S L8 AND (FATTY OR EICOSAPENT? OR DOCOSAHEXA?)
SELECT RN L9 1-4

FILE 'REGISTRY' ENTERED AT 07:20:21 ON 16 FEB 2000

L10 30 S E1-30

FILE 'HCAPLUS' ENTERED AT 07:20:31 ON 16 FEB 2000

L11 4 S L9 AND L10

FILE 'REGISTRY' ENTERED AT 07:23:32 ON 16 FEB 2000

E .BETA.-SITOSTEROL/CN
L12 1 S .BETA.-SITOSTEROL/CN
E STIGMASTEROL/CN
L13 1 S STIGMASTEROL/CN
E CAMPESTEROL/CN
L14 1 S CAMPESTEROL/CN

FILE 'HCAPLUS' ENTERED AT 07:35:49 ON 16 FEB 2000

FILE 'REGISTRY' ENTERED AT 07:38:09 ON 16 FEB 2000

L15 STR 83-46-5
L16 50 S L15
L17 STR L15
L18 33 S L17 CSS
L19 719 S L17 CSS FUL
SAV L19 QAZI448/A
L20 STR
L21 50 S L20
L22 STR
L23 50 S L20 AND L22
L24 SCR 1199
L25 50 S L20 AND L22 AND L24
L26 STR
L27 50 S L20 AND L22 AND L26 AND L24
L28 6566 S L20 AND L22 AND L26 AND L24 FUL
SAV TEMP L28 QAZI448B/A
L29 13 S L19 AND L28

FILE 'CAPLUS' ENTERED AT 07:45:25 ON 16 FEB 2000

L30 17 S L29
L31 10038 S L19
L32 11497 S (L19 OR BETA SITOSTEROL OR STIGMASTEROL OR CAMPESTEROL)
L33 42997 S (L28 OR EICOSAPENTAENO? OR DOCOSAHEXAENO?)

Searched by John Dantzman 308-4488

L34 689 S L32 AND L33
L35 689 S L32 AND L33
L36 26 S L31 AND (EICOSAPENTAENO? OR DOCOSAHEXAENO?)
L37 4 S L31(L) (EICOSAPENTAENO? OR DOCOSAHEXAENO?)
L38 20 S L30 OR L37
L39 22 S L36 NOT L38

FILE 'REGISTRY' ENTERED AT 07:48:54 ON 16 FEB 2000

L40 5 S L19 AND EICOSA?
L41 4 S L19 AND DOCOSA?
L42 19 S L40 OR L41 OR L29

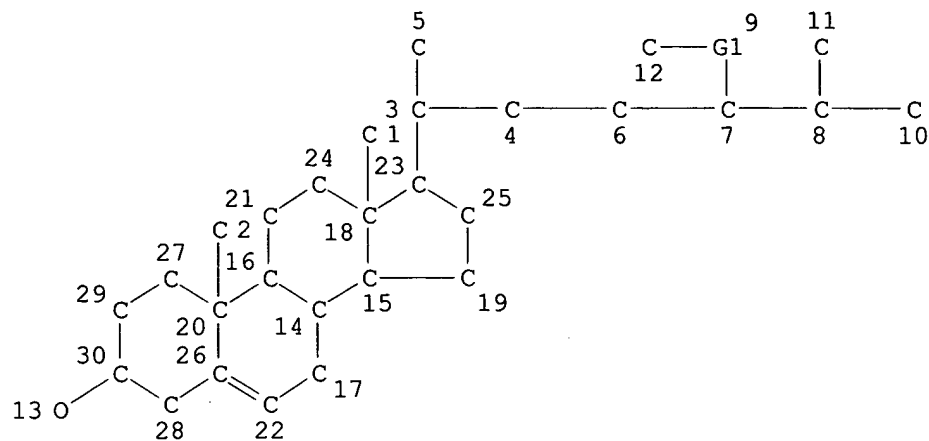
FILE 'CAPLUS' ENTERED AT 07:49:43 ON 16 FEB 2000

L43 28 S L42 OR L29
L44 31 S L42 OR L29 OR L37
L45 22 S L36 NOT L44

=> D QUE L19

L17

STR



REP G1=(0-1) C

NODE ATTRIBUTES:

CONNECT IS M1 RC AT 13

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 30

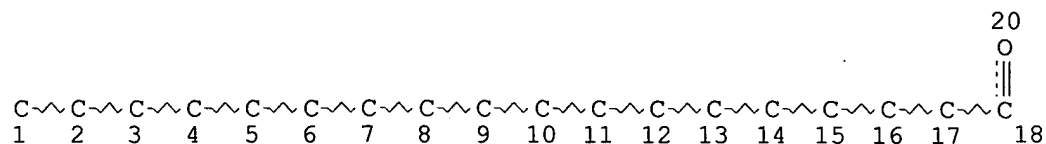
STEREO ATTRIBUTES: NONE

L19 719 SEA FILE=REGISTRY CSS FUL L17

=> D QUE L28

L20

STR



NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

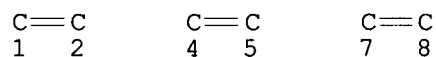
RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 19

STEREO ATTRIBUTES: NONE

L22

STR



NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 6

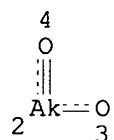
STEREO ATTRIBUTES: NONE

L24

SCR 1199

L26

STR



NODE ATTRIBUTES:

CONNECT IS E2 RC AT 2

DEFAULT MLEVEL IS ATOM

GGCAT IS UNS AT 2

DEFAULT ECLEVEL IS LIMITED

ECOUNT IS M18-X22 C AT 2

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 3

STEREO ATTRIBUTES: NONE

L28

6566 SEA FILE=REGISTRY SSS FUL L20 AND L22 AND L26 AND L24

QAZI

09/448356

Page 5

Searched by John Dantzman

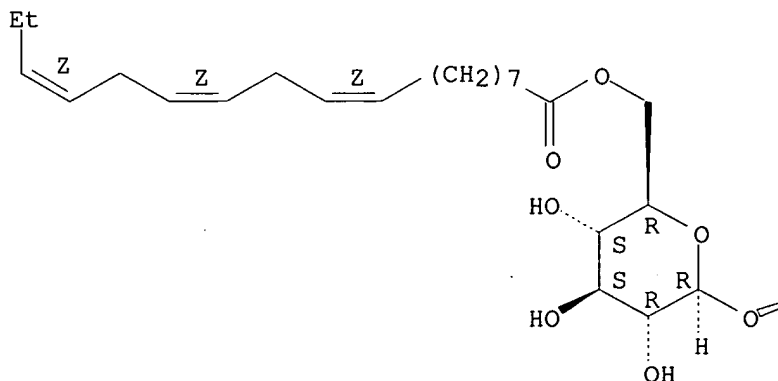
308-4488

=> D L44 BIB ABS HITSTR 3

L44 ANSWER 3 OF 31 CAPLUS COPYRIGHT 2000 ACS
AN 1998:289954 CAPLUS
DN 128:306222
TI Triterpenoids and other compounds from *Euphorbia esula* and *E. petiolata*
AU Shi, Yan-Ping; Jia, Zhong-Jian
CS Department of Chemistry, State Key Laboratory of Applied Organic
Chemistry, Lanzhou University, Lanzhou, 730000, Peop. Rep. China
SO Indian J. Chem., Sect. B: Org. Chem. Incl. Med. Chem. (1997), 36B(11),
1038-1043
CODEN: IJSBDB; ISSN: 0376-4699
PB National Institute of Science Communication, CSIR
DT Journal
LA English
AB In our phytochem. investigation of triterpenoids from the genus *Euphorbia*
esula and *E. petiolata*, twelve compds. have been isolated and identified
as a new triterpene, 23,25-O-isopropylidene-cycloartanol and a new
naturally occurring acylglucosylsterol, .beta.-sitosterol-3-O-(6'-
linolenoyl)-.beta.-D-glucopyranoside, together with ten known compds.,
3.beta.-hydroxyfriedal-7-ene, cycloart-23-ene-3.beta.,25-diol,
cycloartan-24,25-epoxy-3.beta.-ol, .beta.-sitosterol, .beta.-daucosterol,
cycloartenol, cycloartan-3.beta.,24.xi.,25-triol, Ingenol-3,5,20-
triacetate, oleanic acid, and glyceryl linolenate on the basis of
spectroscopic methods and chem. evidences.
IT 79380-29-3P
RL: BOC (Biological occurrence); PRP (Properties); PUR (Purification or
recovery); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)
(from *Euphorbia esula* and *E. petiolata*)
RN 79380-29-3 CAPLUS
CN .beta.-D-Glucopyranoside, (3.beta.)-stigmast-5-en-3-yl,
6-(9,12,15-octadecatrienoate), (Z,Z,Z)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

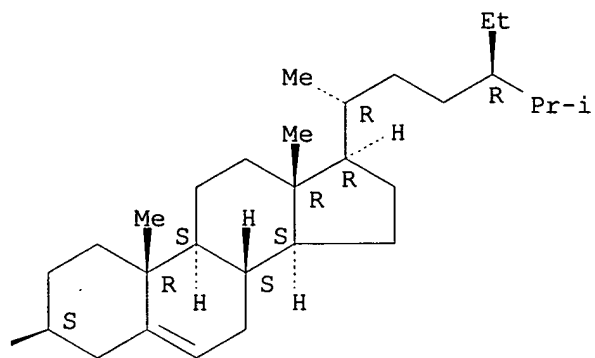
PAGE 1-A



Searched by John Dantzman

308-4488

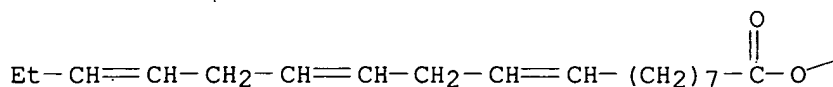
PAGE 1-B



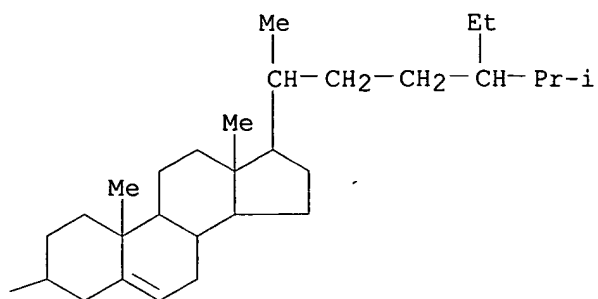
=> D L44 BIB ABS HITSTR 7

L44 ANSWER 7 OF 31 CAPLUS COPYRIGHT 2000 ACS
AN 1996:306307 CAPLUS
DN 124:341383
TI Use of lipolysis in the isolation of sterol esters
AU Miller, L. A. D.; Gordon, M. H.
CS Dep. Food Science, Univ. Reading, Reading, Berkshire, RG6 6AP, UK
SO Food Chem. (1996), 56(1), 55-59
CODEN: FOCHDJ; ISSN: 0308-8146
DT Journal
LA English
AB The isolation of sterol esters from edible oils is hindered by the
in presence of relatively large amts. of triacylglycerols that are similar
polarity to the sterol esters. This paper describes the use of lipolysis
with porcine pancreatic lipase to selectively hydrolyze the
triacylglycerols. The sterol esters can then be readily sepd. from the
resulting free fatty acids, monoacylglycerols and any remaining
diacylglycerols by flash chromatog. Gas chromatog. (GC) and gas
chromatog.-mass spectrometry (GC-MS) can then be used to analyze and
partially identify the intact sterol esters.
IT 3177-92-2P 94365-87-4P, Campesteryl linolenate
RL: BOC (Biological occurrence); PUR (Purification or recovery); BIOL
(Biological study); OCCU (Occurrence); PREP (Preparation)
(use of lipolysis in the isolation of sterol esters)
RN 3177-92-2 CAPLUS
CN Stigmast-5-en-3-ol, 9,12,15-octadecatrienoate, [3.beta.(9Z,12Z,15Z)]-
(9CI) (CA INDEX NAME)

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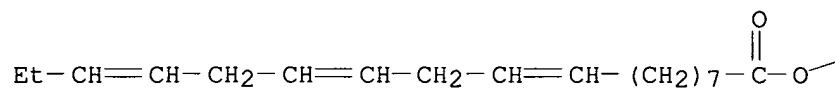
PAGE 1-B



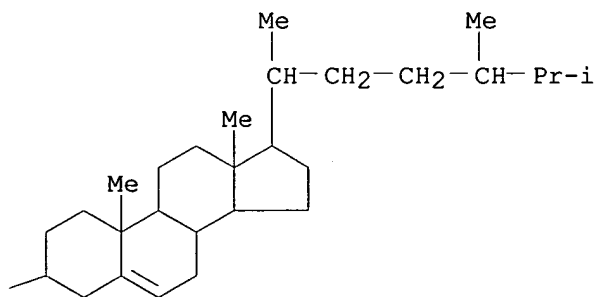
RN 94365-87-4 CAPLUS

CN Ergost-5-en-3-ol, 9,12,15-octadecatrienoate, [3.beta.(9Z,12Z,15Z),24R]-(9CI) (CA INDEX NAME)

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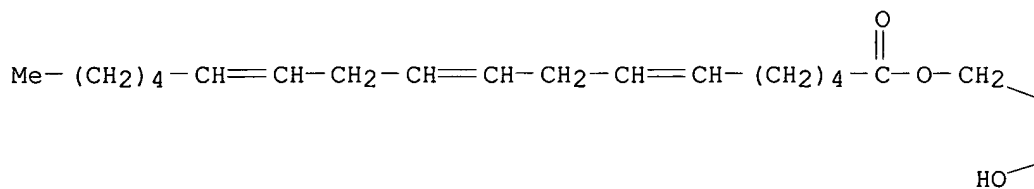
PAGE 1-B



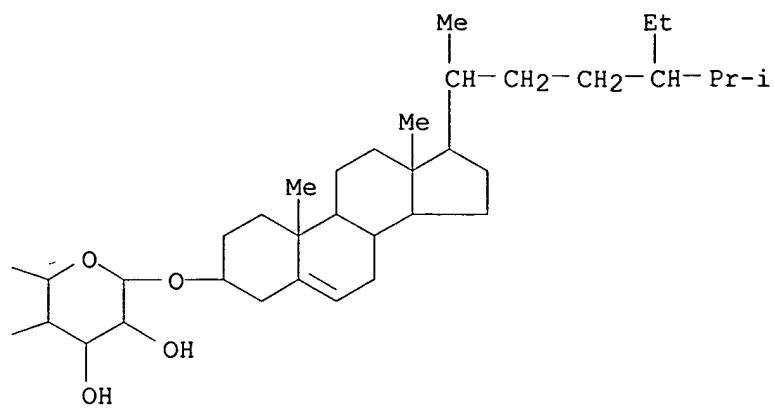
=> D L44 BIB ABS HITSTR 10

L44 ANSWER 10 OF 31 CAPLUS COPYRIGHT 2000 ACS
AN 1992:80474 CAPLUS
DN 116:80474
TI Potential allelochemicals from *Pistia stratiotes* L
AU Aliotta, G.; Monaco, P.; Pinto, G.; Pollio, A.; Previtera, L.
CS Dip. Biol. Veg., Naples, I-80139, Italy
SO J. Chem. Ecol. (1991), 17(11), 2223-34
CODEN: JCECD8; ISSN: 0098-0331
DT Journal
LA English
AB Among the substances isolated from Et ether ext. of *Pistia stratiotes*, linoleic acid, .gamma.-linolenic acid, (12R,9Z,13E,15Z)-12-hydroxy-9,13,15-octadecatrienoic acid, (9S,10E,12Z,15Z)-9-hydroxy-10,12,15-octadecatrienoic acid, .alpha.-asarone, and 24S-ethyl-4,22-cholestadiene-3,6-dione were found to inhibit the growth of some microalgae in solid medium. Toxicity of .alpha.-asarone on the growth of sensitive algal strains in liq. medium is discussed.
IT 132616-51-4
RL: BIOL (Biological study)
(from *Pistia stratiotes*)
RN 132616-51-4 CAPLUS
CN .beta.-D-Glucopyranoside, (3.beta.)-stigmast-5-en-3-yl, 6-(6,9,12-octadecatrienoate), (Z,Z,Z)- (9CI) (CA INDEX NAME)

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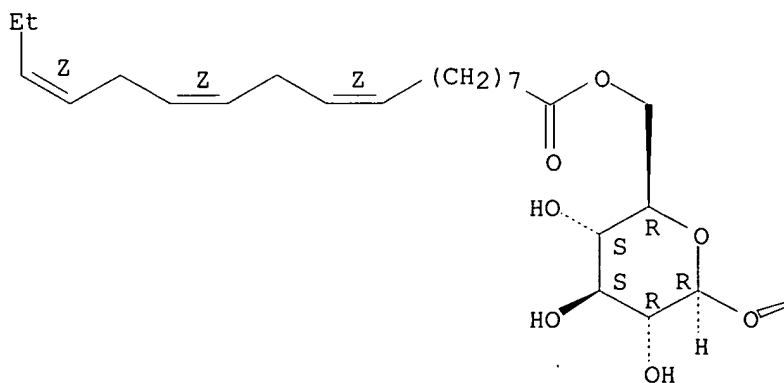


=> D L44 BIB ABS HITSTR 12

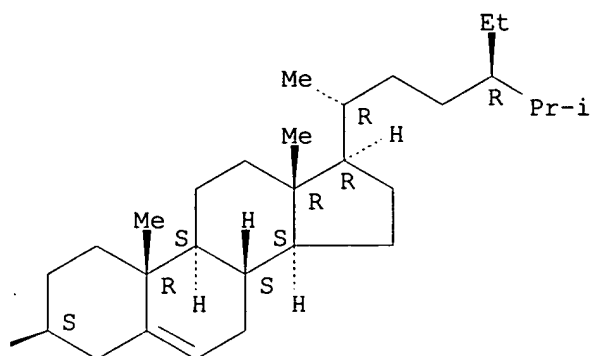
L44 ANSWER 12 OF 31 CAPLUS COPYRIGHT 2000 ACS
AN 1992:18367 CAPLUS
DN 116:18367
TI Piscicidal sterol acylglucosides from *Edgeworthia chrysantha*
AU Hashimoto, Toshihiro; Tori, Motoo; Asakawa, Yoshinori
CS Fac. Pharm. Sci., Tokushima Bunri Univ., Tokushima, 770, Japan
SO Phytochemistry (1991), 30(9), 2927-31
CODEN: PYTCAS; ISSN: 0031-9422
DT Journal
LA English
AB New potent piscicidal sterol acylglucosides named chrysanthosides were obtained from the flower of *E. chrysantha*, together with the previously known bis-coumarin daphnoretin and grasshopper ketone, and their structures were characterized as sitosterol-3-O-6-linoleoyl- and sitosterol-3-O-6-linolenoyl-.beta.-D-glucopyranosides on the basis of spectral data and synthesis. The natural and synthetic chrysanthosides possess potent piscicidal activity against killie fish which was killed within 3 h at a concn. of 0.1 ppm.
IT 79380-29-3
RL: BOC (Biological occurrence); BIOL (Biological study); OCCU (Occurrence)
(of *Edgeworthia chrysantha*, isolation and structure and piscicidal activity of)
RN 79380-29-3 CAPLUS
CN .beta.-D-Glucopyranoside, (3.beta.)-stigmast-5-en-3-yl, 6-(9,12,15-octadecatrienoate), (Z,Z,Z)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

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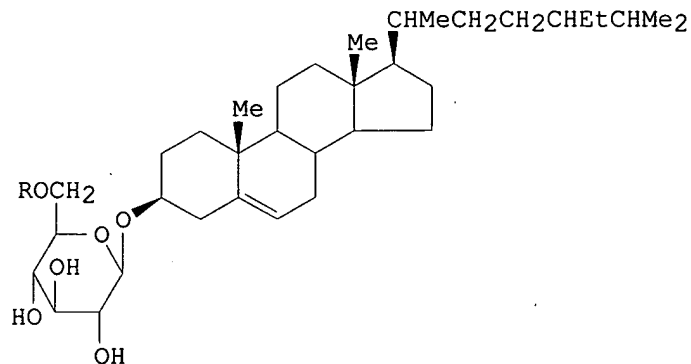


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=> D L44 BIB ABS HITSTR 14

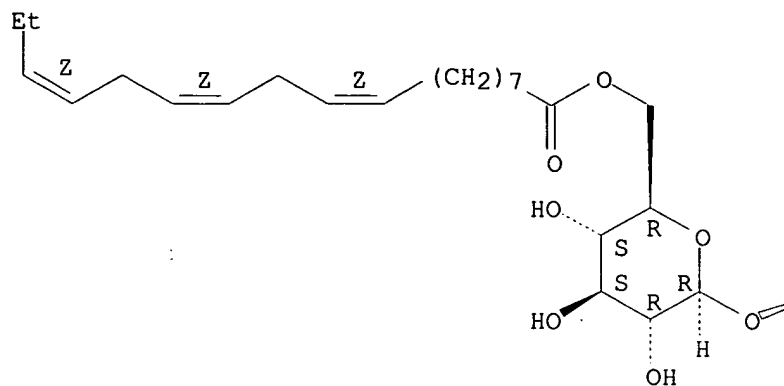
L44 ANSWER 14 OF 31 CAPLUS COPYRIGHT 2000 ACS
AN 1991:118495 CAPLUS
DN 114:118495
TI Studies on aquatic plants. Part XVI. Stigmasterols from *Typha latifolia*
AU Della Greca, Marina; Monaco, Pietro; Previtera, Lucio
CS Dep. Org. Biol. Chem., Univ. Naples, Naples, I-80134, Italy
SO J. Nat. Prod. (1990), 53(6), 1430-5
CODEN: JNPRDF; ISSN: 0163-3864
DT Journal
LA English
GI



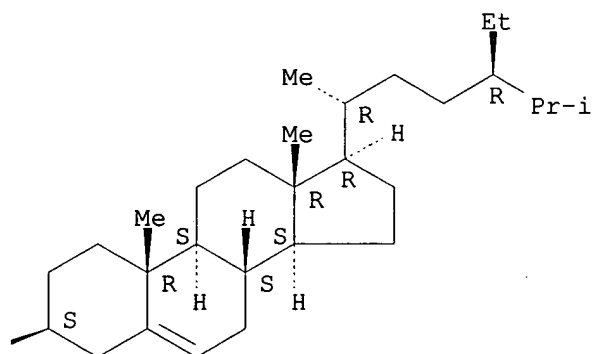
AB Several free and acylglucosylated stigmasterols were isolated from the aquatic plant *T. latifolia*. The structures of 3 novel acylglucosylsterols (I, R = e.g., octadecanoyl, octadecadienoyl, or octadecatrienoyl) were detd. by spectroscopic data and by chem. modification studies.
IT 79380-29-3 132616-51-4
RL: BIOL (Biological study)
(of *Typha latifolia*, structure of)
RN 79380-29-3 CAPLUS
CN .beta.-D-Glucopyranoside, (3.beta.)-stigmast-5-en-3-yl, 6-(9,12,15-octadecatrienoate), (2,2,Z)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

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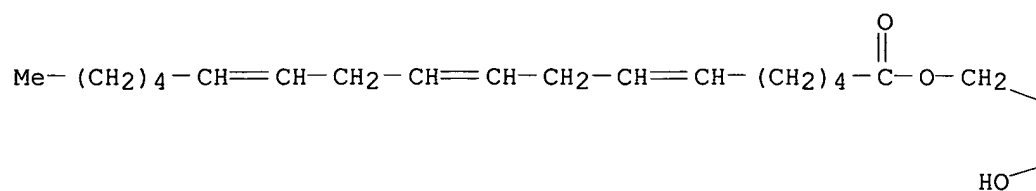
PAGE 1-B



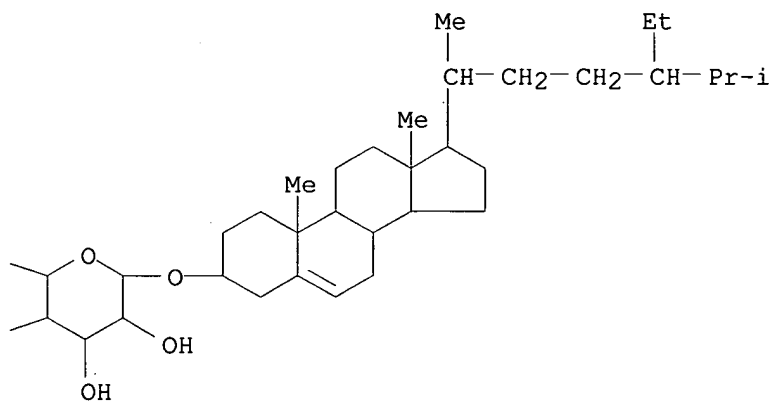
RN 132616-51-4 CAPLUS

CN .beta.-D-Glucopyranoside, (3.beta.)-stigmast-5-en-3-yl,
6-(6,9,12-octadecatrienoate), (Z,Z,Z)- (9CI) (CA INDEX NAME)

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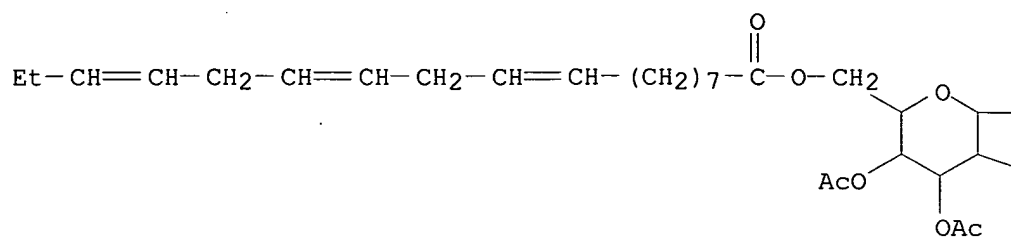
IT 132586-70-0P 132586-71-1P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

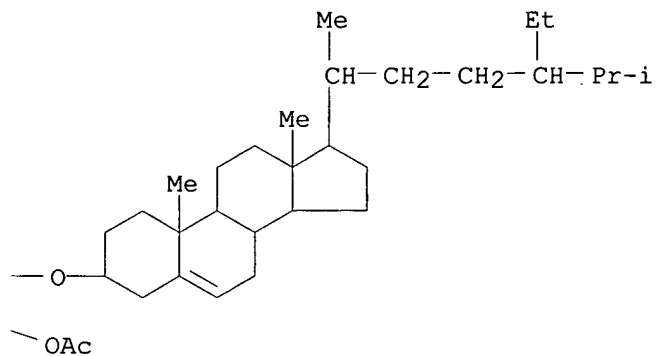
RN 132586-70-0 CAPLUS

CN .beta.-D-Glucopyranoside, (3.beta.)-stigmast-5-en-3-yl, 2,3,4-triacetate
6-(9,12,15-octadecatrienoate), (Z,Z,Z)- (9CI) (CA INDEX NAME)

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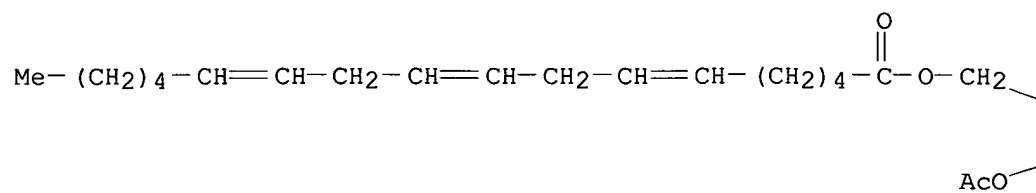
PAGE 1-B



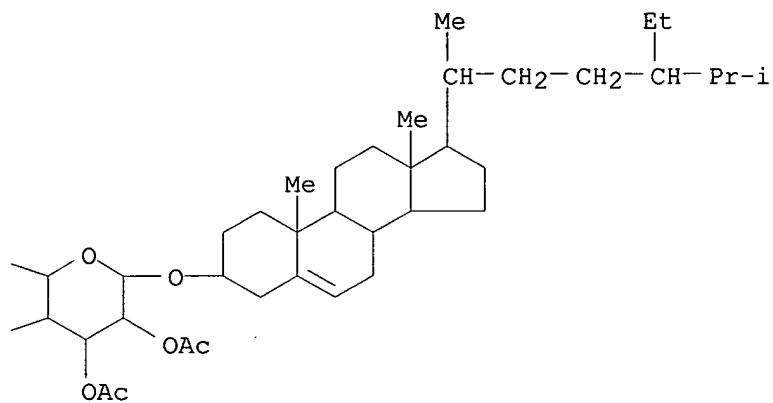
RN 132586-71-1 CAPLUS

CN .beta.-D-Glucopyranoside, (3.beta.)-stigmast-5-en-3-yl, 2,3,4-triacetate
6-(6,9,12-octadecatrienoate), (Z,Z,Z)- (9CI) (CA INDEX NAME)

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=> D L44 BIB ABS HITSTR 17

L44 ANSWER 17 OF 31 CAPLUS COPYRIGHT 2000 ACS

AN 1990:240295 CAPLUS

DN 112:240295

TI Hair growth-stimulating preparations and hair tonics containing sterol unsaturated fatty acid esters

IN Katada, Tomonori; Oshima, Manabu; Konishi, Hiroaki

PA Nonogawa Shoji Y. K., Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

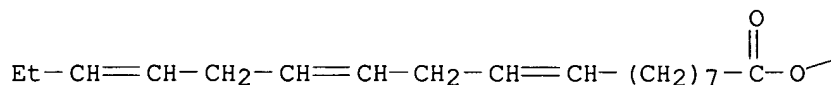
DT Patent

LA Japanese

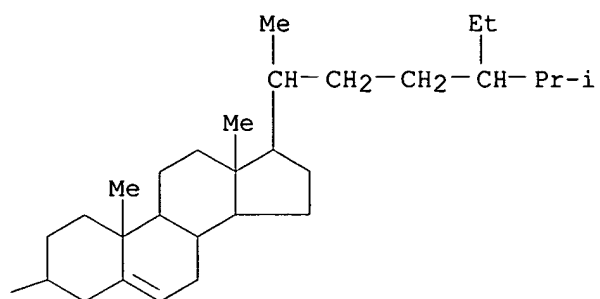
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	JP 02006404	A2	19900110	JP 1988-157692	19880624
OS	MARPAT 112:240295				
AB	Hair growth-stimulating prepns. and hair tonics contain .gtoreq.1 sterol unsatd. fatty acid esters as active ingredients. The hair prepns. are not irritating to the skin. A hair tonic comprised 95% EtOH 96.0, .beta.-sitosteryl linolenate 2.0, and glycerin 2.0 parts.				
IT	3177-92-2				
	RL: BIOL (Biological study)				
	(hair growth-stimulating prepns. contg.)				
RN	3177-92-2 CAPLUS				
CN	Stigmast-5-en-3-ol, 9,12,15-octadecatrienoate, [3.beta.(9Z,12Z,15Z)]-(9CI) (CA INDEX NAME)				

PAGE 1-A



PAGE 1-B



=> D L44 BIB ABS HITSTR 26

L44 ANSWER 26 OF 31 CAPLUS COPYRIGHT 2000 ACS

AN 1985:44560 CAPLUS

DN 102:44560

TI Studies on the lipid composition in three species of shellfish

AU Son, Young Ock; Ha, Bong Seuk

CS Dep. Nurs. Sci., Jinju Health Nurse's Coll., S. Korea

SO Han'guk Yongyang Siklyong Hakhoechi (1983), 12(4), 407-19

CODEN: HYSHDL; ISSN: 0253-3154

DT Journal

LA Korean

AB Total lipid contents of shellfish were 1.8% in oyster, 0.4% in top shell (Turbo cornutus) and 4.0% in corb shell (Corbicula fluminea producta). The contents of total fatty acids in total lipids were 80.7, 71.2 and 73.2%; and the contents of unsaponifiable matters were 15.4, 18.1 and 23.1%, resp. Total lipids were mainly composed of triglycerides, polar lipid-pigments and sterols, and hydrocarbon-esterified sterols were detd. in each sample. The major fatty acids in total lipids were palmitic (37.0%), **eicosapentaenoic** (13.5%) and linoleic acid (11.2%) in oyster, octadecatetraenoic (15.8%), palmitic (11.2%), oleic (8.6%) and linoleic acid (8.1%) in top shell, and palmitic (34.0%), linoleic (12.3%) and palmitoleic acid (9.8%) in corb shell. The contents of **eicosapentaenoic** acid of oyster and top shell were higher than those of corb shell. Sterols mainly consisted of cholesterol [57-88-5] (42.7.apprx.64.0%), brassicasterol [474-67-9] (15.6.apprx.24.7%), and 24-methylenecholesterol [474-63-5] (4.7.apprx.21.9%). Sitosterol [83-46-5] (5.3%) was detected only in oyster and 22-dehydrocholesterol [34347-28-9] (12.9%) only in top shell. The contents of fractionated neutral lipids were higher than those of polar lipids, in each sample. Glycolipids and phospholipids in polar lipids were similar in quantity. The neutral lipids were composed of triglycerides (33.0.apprx.36.7%), free sterols (25.7-31.2%), esterified sterols (12.4-23.7%) and free fatty acids (5.1-11.7%). The contents of triglycerides and free sterols were higher than those of free fatty acids and esterified sterols. The major fatty acids in neutral lipids were palmitic (28.4.apprx.25.4%), **eicosapentaenoic** (18.6.apprx.21.9%) and linoleic acid (9.0.apprx.5.4%) in oyster and corb shell and octadecatetraenoic (14.5%), **eicosapentaenoic** (13.5%) and palmitic acid (12.3%) in top shell. The major fatty acids in glycolipids were eicosenoic (10.2%), palmitic (12.1%) and linolenic acid (10.2%) in oyster, eicosenoic (26.0%), octadecatetraenoic (14.6%) and eicosadienoic acid (12.9%) in top shell, and eicosadienoic (21.4%) stearic (14.6%), octadecatetraenoic (8.5%) and eicosenoic acid (8.5%) in corb shell. The major fatty acids in phospholipids were myristic (16.0%), stearic (10.6%), eicosenoic (10.5%) and palmitic acid (10.3%) in oyster, oleic (22.2%), stearic (20.7%) and linolenic acid (11.8%) in top shell, and **eicosapentaenoic** (25.1%), myristic (8.7%) and arachidonic acid (8.3%) in corb shell.

=> D L44 BIB ABS HITSTR 27

L44 ANSWER 27 OF 31 CAPLUS COPYRIGHT 2000 ACS

AN 1982:526182 CAPLUS

DN 97:126182

TI Sterols and fatty acids of the lab-lab and snail from the milkfish pond

AU Teshima, Shinichi; Kanazawa, Akio; Tago, Akio

CS Fac. Fish., Kagoshima Univ., Kagoshima, Japan

SO Kagoshima Daigaku Suisangakubu Kiyo (1981), 30, 317-23

CODEN: KDSGA3; ISSN: 0453-087X

DT Journal

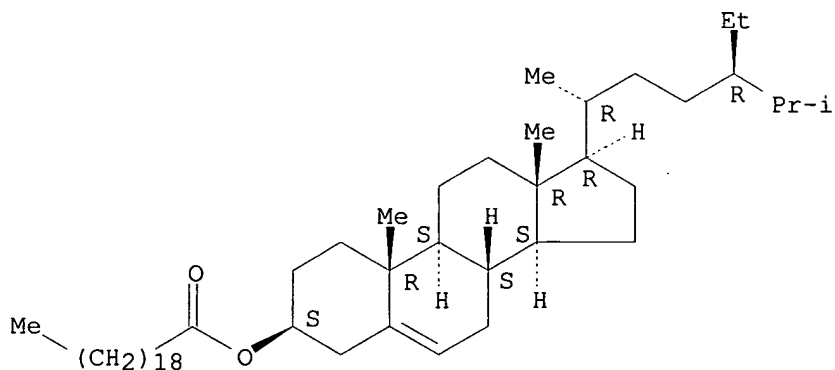
LA English

AB The sterol and fatty acid compns. of the lab-lab and snail (family Cerithiidae) were analyzed in the interests of bio-ecol. transport of dietary sterols and fish nutrition in an extensive fish pond. The floating lab-lab contained cholesterol (I) [57-88-5] (40.2% of total sterols), 24-methylcholesterol (II) [23929-42-2] (14.0%), 24-methylcholesta-5,22-dienol (III) [2638-57-5] (17.3%), 24-ethylcholesterol (IV) [19044-06-5] (7.2%), and 24-ethylcholesta-5,22-dienol (V) [76250-40-3] (9.7%) as the major sterols. In the adhering lab-lab, 24-(E)-ethylidenecholesterol [17605-67-3] (13.3%) was the prominent sterol in addn. to the above-mentioned 5 sterols. The snail contained I (54.9%), cholesta-7-enol [6036-58-4] (5.9%), II (12.6%), IV (3.9%), cholesta-5,22-dienol [566-89-2] (6.7%), III (9.4%), cholesta-5,24-dienol [313-04-2] (6.0%), and a small amt. of V (0.5%). The fatty acid compn. of floating lab-lab resembled that of adhering lab-lab. The 2 types of lab-lab contained palmitic (16:0) and palmitoleic (16:1) acids as the major fatty acids and substantial amts. of linoleic (3.6 and 6.1%) and linolenic (4.5%) acids, but very low levels of eicosapentaenoic and docosahexaenoic acids.

=> D L44 BIB ABS HITSTR 9

L44 ANSWER 9 OF 31 CAPLUS COPYRIGHT 2000 ACS
AN 1993:535582 CAPLUS
DN 119:135582
TI Steroids and fatty acids from *Erythrina variegata* var. *orientalis* flowers
AU Sharma, S. K.; Chawla, H. M.
CS Dep. Chem., Indian Inst. Technol., New Delhi, 110016, India
SO Fitoterapia (1993), 64(1), 88
CODEN: FTRPAE; ISSN: 0367-326X
DT Journal
LA English
AB In addn. to known constituents, 3-.beta.-acetoxy-B-norcholest-5-ene, capric acid, docosanoic Me ester, 29-norcycloartenol, and .beta.-sitosterol-archidate were identified in air-dried flowers of *E. variegata orientalis*.
IT 59015-74-6
RL: BOC (Biological occurrence); BIOL (Biological study); OCCU (Occurrence)
(of *Erythrina variegata orientalis* flowers)
RN 59015-74-6 CAPLUS
CN Stigmast-5-en-3-ol, eicosanoate, (3.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> D L44 BIB ABS HITSTR 11

L44 ANSWER 11 OF 31 CAPLUS COPYRIGHT 2000 ACS

AN 1992:57644 CAPLUS

DN 116:57644

TI Steryl ester analysis as an aid to the identification of oils in blends

AU Gordon, Michael H.; Griffith, Rosemary E.

CS Dep. Food Sci. Technol., Univ. Reading, Whiteknights, Reading, RG6 2AP,

UK

SO Food Chem. (1991), Volume Date 1992, 43(1), 71-8

CODEN: FOCHDJ; ISSN: 0308-8146

DT Journal

LA English

AB Sixty steryl esters were synthesized in simple mixts. and used to optimize

conditions for the sepn. of steryl esters by reversed-phase HPLC on an ODS-2 column with a mass detector and by gas chromatog. on a WCOT capillary column (triglyceride anal. phase) and flame-ionization detection. Both techniques give good sepns. of many steryl esters, but the techniques complement each other since the elution sequences differ. A steryl ester-rich fraction was isolated from 14 oil samples by thin-layer chromatog. and analyzed by GC and HPLC. GC anal. is more sensitive and faster than HPLC, and also has the advantage that residual triacylglycerols are sepd. from the steryl esters. The pattern of chromatog. peaks is similar for different samples of the same oil, but varies widely for different oils. Thus, GC anal. of the intact steryl ester fraction may be useful as a technique for identifying mixts. of oils.

IT 3177-92-2 59015-74-6, .beta.-Sitosteryl arachidate

94365-87-4, Campesteryl linolenate 110671-71-1,

Campesteryl arachidate

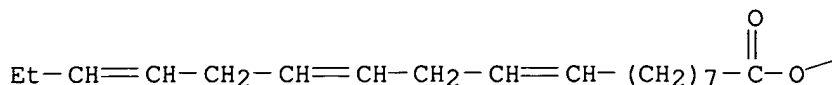
RL: ANT (Analyte); ANST (Analytical study)

(detn. of, in oils by gas chromatog. and HPLC)

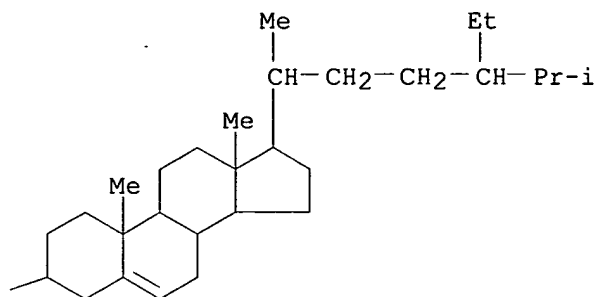
RN 3177-92-2 CAPLUS

CN Stigmast-5-en-3-ol, 9,12,15-octadecatrienoate, [3.beta.(9Z,12Z,15Z)]-(9CI) (CA INDEX NAME)

PAGE 1-A



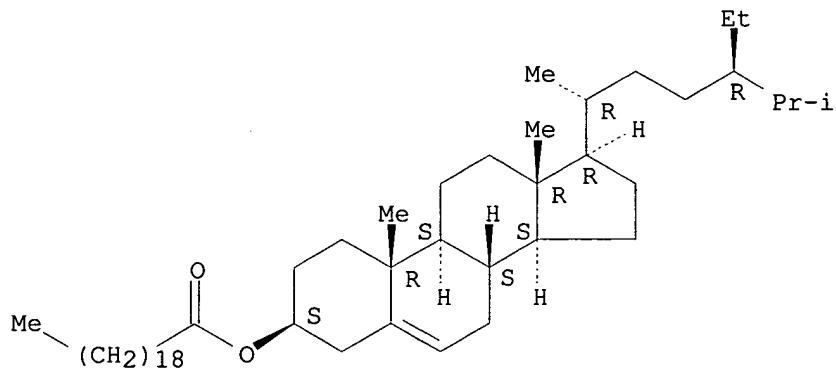
PAGE 1-B



RN 59015-74-6 CAPLUS

CN Stigmast-5-en-3-ol, eicosanoate, (3.beta.)- (9CI) (CA INDEX NAME)

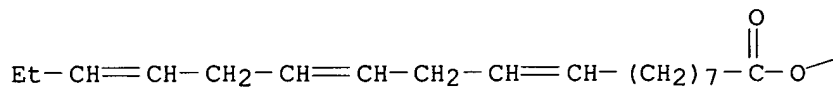
Absolute stereochemistry.



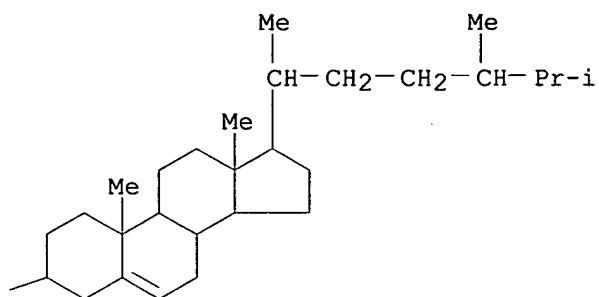
RN 94365-87-4 CAPLUS

CN Ergost-5-en-3-ol, 9,12,15-octadecatrienoate, [3.beta.(9Z,12Z,15Z),24R]- (9CI) (CA INDEX NAME)

PAGE 1-A



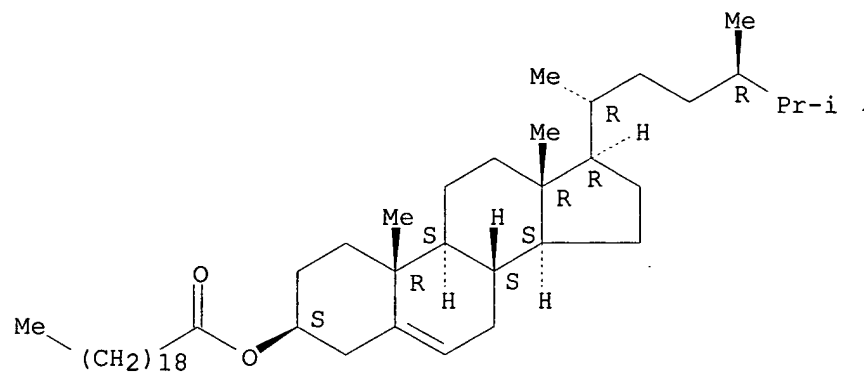
PAGE 1-B



RN 110671-71-1 CAPLUS

CN Ergost-5-en-3-ol, eicosanoate, (3.β.,24R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> D L44 BIB ABS HITSTR 6

L44 ANSWER 6 OF 31 CAPLUS COPYRIGHT 2000 ACS

AN 1998:124001 CAPLUS

DN 128:196677

TI Spontaneously dispersible concentrates of sterol esters and vitamin D derivatives with antiviral and/or parasitocidal effects

IN Eugster, Carl

PA Marigen S.A., Switz.; Eugster, Carl

SO PCT Int. Appl., 54 pp.

CODEN: PIXXD2

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	---	-----	-----	-----
PI	WO 9806390	A1	19980219	WO 1996-CH280	19960813
	W: US				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT,				
SE	EP 858331	A1	19980819	EP 1996-925634	19960813
	R: DE, FR, GB, IT				

PRAI WO 1996-CH280 19960813

OS MARPAT 128:196677

AB Ultramicroemulsions prepd. from spontaneously dispersible concs. of C2-31 alkyl, C3-31 alkenyl or alkapolyenyl, and retinyl esters of certain sterols and vitamin D derivs., together with surfactants and optional solvents, emulsifiers, and coemulsifiers, show antiviral/virucidal and/or parasitocidal (esp. trypanosomicidal) activity. The micellar structure of

these esters in the inner oil phase of the emulsions allows them to diffuse through cell membranes into infected cells. Thus, 44 wt.% granules contg. Metolose 90 SH-4000 90.0, Avicel PH-101 80.3, Marigenol conc. (contg. .beta.-sitosteryl palmitate) 134.9, and Aerosil 200 80.3 parts were coated with a mixt. of Marigenol conc. 25 and Aqoat AS-HG enteric delayed-release coating material 31 parts to produce a multiple-unit prepn. An ultramicroemulsion contg. 100 ppm .beta.-sitosteryl palmitate protected MT4 cells (an eternalized T-cell line) from infection with HIV IIIB.

IT 3177-92-2 22554-56-9 59015-74-6,

.beta.-Sitosteryl arachidate

RL: BAC (Biological activity or effector, except adverse); THU

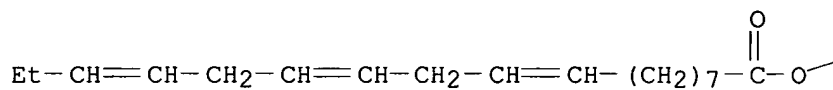
(Therapeutic use); BIOL (Biological study); USES (Uses)

(spontaneously dispersible concs. of sterol esters and vitamin D derivs. with antiviral and parasitocidal effects)

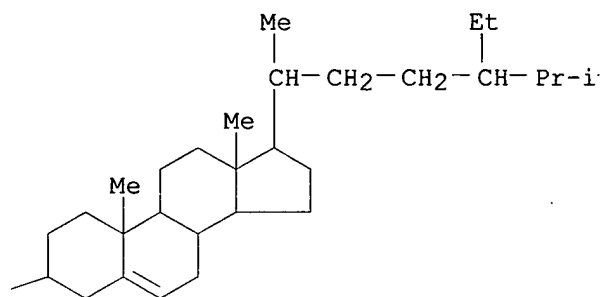
RN 3177-92-2 CAPLUS

CN Stigmast-5-en-3-ol, 9,12,15-octadecatrienoate, [3.beta.(9Z,12Z,15Z)]-(9CI) (CA INDEX NAME)

PAGE 1-A



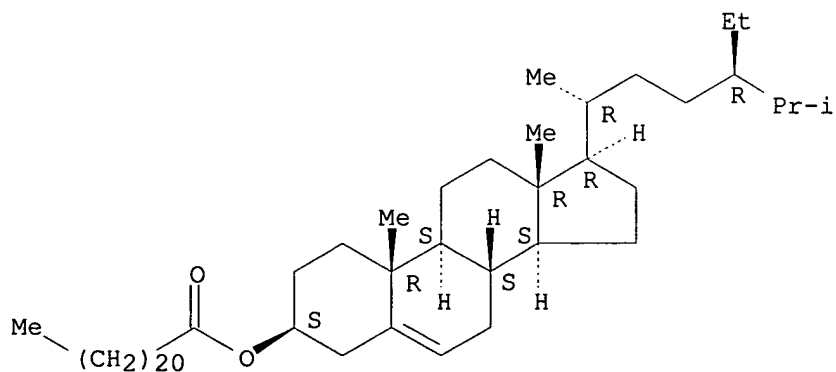
PAGE 1-B



RN 22554-56-9 CAPLUS

CN Stigmast-5-en-3-ol, docosanoate, (3.beta.)- (9CI) (CA INDEX NAME)

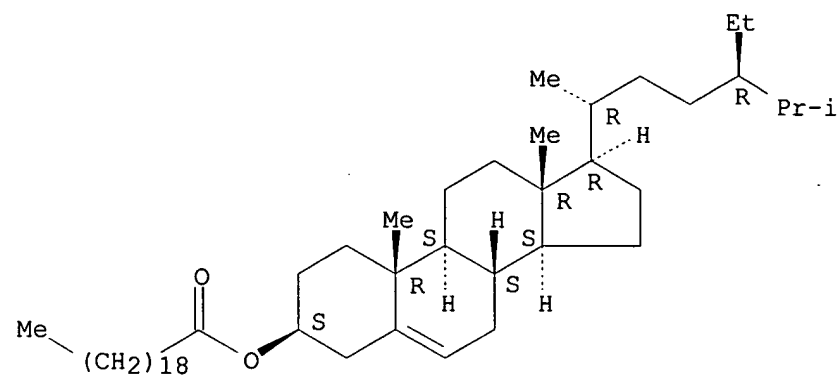
Absolute stereochemistry.



RN 59015-74-6 CAPLUS

CN Stigmast-5-en-3-ol, eicosanoate, (3.beta.)- (9CI) (CA INDEX NAME)

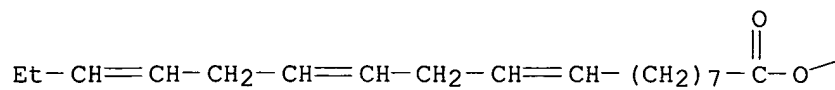
Absolute stereochemistry.



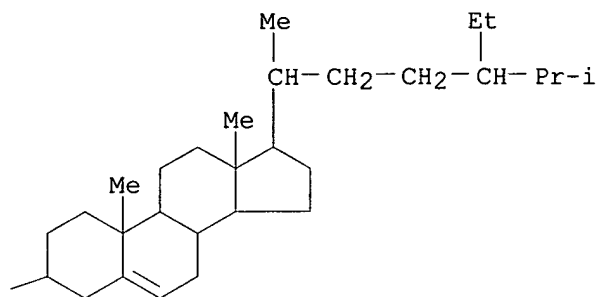
=> D L44 BIB ABS HITSTR 29

L44 ANSWER 29 OF 31 CAPLUS COPYRIGHT 2000 ACS
AN 1981:585727 CAPLUS
DN 95:185727
TI Sterols, esterified sterols, and glycosylated sterols of cowpea lipids
(*Vigna unguiculata*)
AU Mahadevappa, Vhundi G.; Raina, Piyara L.
CS Cent. Food Technol. Res. Inst., Mysore, 570 013, India
SO J. Agric. Food Chem. (1981), 29(6), 1225-7
CODEN: JAFCAU; ISSN: 0021-8561
DT Journal
LA English
AB Four sterol-contg. lipid fractions, viz. free sterol, esterified sterol,
sterol glycoside, and esterified sterol glycoside, were isolated from the
CHCl₃-MeOH-extd. lipids of cowpea by preparative column and thin-layer
chromatog. On a total lipid basis, these comprised 0.13, 0.024, 0.036,
and 0.029%, resp. The major fatty acids in both the esterified fractions
were linoleic, linolenic and palmitic acids. The esterified sterol
fraction was more unsatd. (calcd. I value 139) than the esterified sterol
glycosides (calcd. I value 93). All the sterol lipids contained high
proportions of .beta.-sitosterol [83-46-5] and stigmasterol [83-48-7]
and 2.8-4.6% campesterol [474-62-4]. The only sugar identified in both
the glycosylated sterols was D-glucose. On the basis of the findings,
the major representative species deduced are as follows: esterified sterols,
.beta.-sitosterol linoleate [3577-13-7], stigmasterol linoleate
[71278-15-4], and to a lesser extent these sterols with palmitate and
linoleate esters; sterol glycosides,
.beta.-D-glucopyranosyl-(1.fwdarw.3)-
.beta. sitosterol [474-58-8] or -stigmasterol [19716-26-8]; and
esterified sterol glycosides, 6-O-palmitoyl-.beta.-D-glucopyranosyl-
(1.fwdarw.3)-.beta.-sitosterol [18749-71-8] or -stigmasterol
[59252-96-9].
IT 3177-92-2 79380-29-3
RL: BOC (Biological occurrence); BIOL (Biological study); OCCU
(Occurrence)
(of cowpea)
RN 3177-92-2 CAPLUS
CN Stigmast-5-en-3-ol, 9,12,15-octadecatrienoate, [3.beta.(9Z,12Z,15Z)]-
(9CI) (CA INDEX NAME)

PAGE 1-A



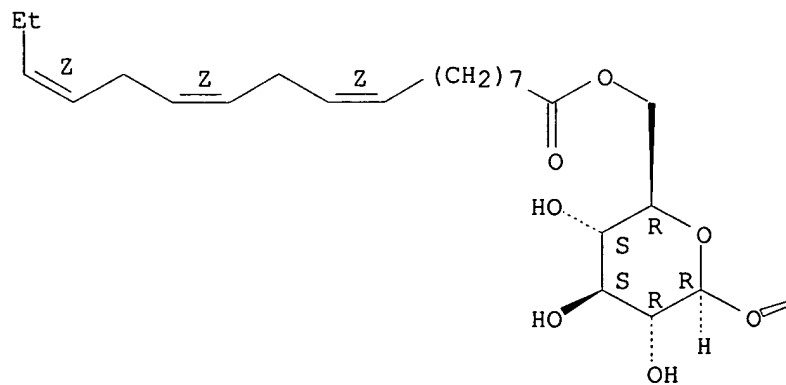
PAGE 1-B



RN 79380-29-3 CAPLUS

CN .beta.-D-Glucopyranoside, (3.beta.)-stigmast-5-en-3-yl,
6-(9,12,15-octadecatrienoate), (Z,Z,Z)- (9CI) (CA INDEX NAME)Absolute stereochemistry.
Double bond geometry as shown.

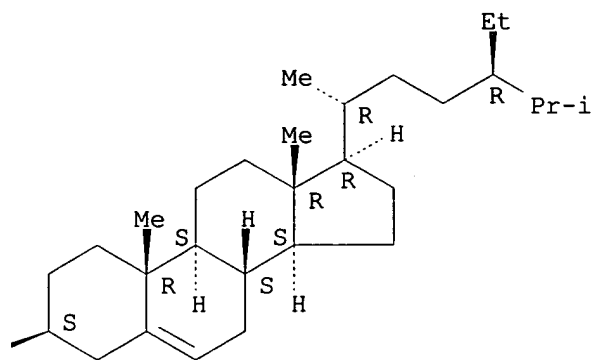
PAGE 1-A



Searched by John Dantzman

308-4488

PAGE 1-B



=> D L44 BIB ABS HITSTR 21

L44 ANSWER 21 OF 31 CAPLUS COPYRIGHT 2000 ACS

AN 1987:159842 CAPLUS

DN 106:159842

TI Esters of acyclic and polycyclic isoprenoid alcohols: Biochemical markers

in lacustrine sediments

AU Cranwell, P. A.

CS Freshwater Biol. Assoc., Ambleside/Cumbria, LA22 0LP, UK

SO Org. Geochem. (1986), 10(4-6), 891-96

CODEN: ORGEDE; ISSN: 0146-6380

DT Journal

LA English

AB Esters of phytol or related isoprenoid acids and fatty acid esters of pentacyclic triterpenoid alcs. and sterols were isolated from lacustrine sediments in the UK varying in age from contemporary to .apprx.50,000 yr old. The esters were analyzed by computerized gas chromatog.-mass spectrometry and identified by gas chromatog. retention data and mass spectral interpretation based on comparison with authentic compds. In surface sediment of a productive lake, phytyl and steryl esters are biochem. markers of input from algal and zooplankton sources. Esters of pentacyclic triterpenols detected in an older, peat-derived sediment may reflect constituents of peat-forming plant species. In sediments derived mainly from terrestrial org. matter, steryl esters contg. the same acyl group showed a lower stanol/.DELTA.5-stenol ratio than did the corresponding free sterols.

IT 22554-56-9 59015-74-6

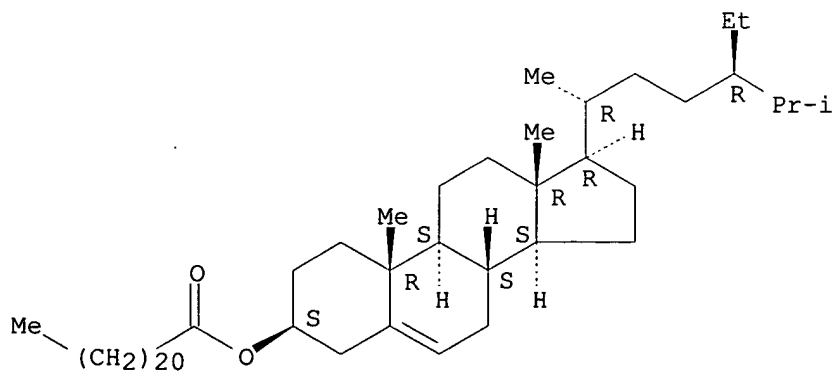
RL: OCCU (Occurrence)

(in lacustrine sediments, as biochem. marker, of Burland and Coniston and Priest Pot, England)

RN 22554-56-9 CAPLUS

CN Stigmast-5-en-3-ol, docosanoate, (3.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



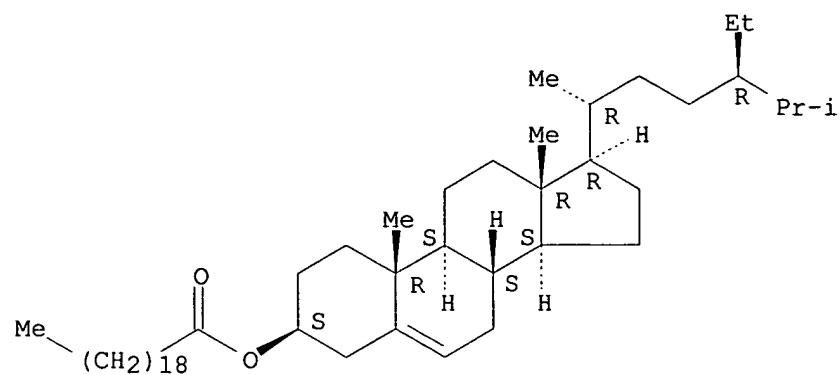
RN 59015-74-6 CAPLUS

CN Stigmast-5-en-3-ol, eicosanoate, (3.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Searched by John Dantzman

308-4488



=> D L44 BIB ABS HITSTR 13

L44 ANSWER 13 OF 31 CAPLUS COPYRIGHT 2000 ACS

AN 1991:687165 CAPLUS

DN 115:287165

TI Esters and glucosides of sterols from seeds as neoplasm inhibitors

IN Eugster, Carl; Eugster, Conrad Hans; Haldemann, Walter; Rivara, Giorgio

PA Marigen S. A., Switz.

SO PCT Int. Appl., 63 pp.

CODEN: PIXXD2

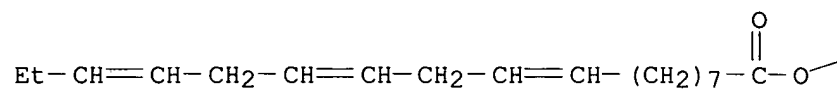
DT Patent

LA German

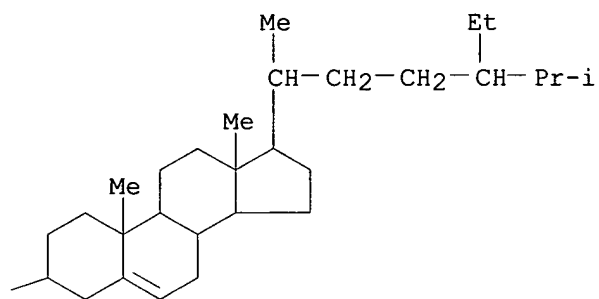
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9101139	A1	19910207	WO 1990-CH164	19900706
	W: JP, US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, IT, LU, NL, SE				
	EP 436682	A1	19910717	EP 1990-909621	19900706
	EP 436682	B1	19940119		
	R: DE, FR, GB, IT, NL				
	JP 04501858	T2	19920402	JP 1990-509266	19900706
	CH 678276	A	19910830	CH 1989-2727	19900905
	US 5270041	A	19931214	US 1991-634215	19910215
PRAI	CH 1989-2727	19890721			
	CH 1989-4308	19891202			
	WO 1990-CH164	19900706			
OS	MARPAT 115:287165				
AB	Sterol glucosides, and esp. sterol fatty acid esters (Markush given), extd. from sunflower (<i>Helianthus annuus</i>) and pumpkin (<i>Curcubita pepo</i> and <i>C. maxima</i>) seeds, are neoplasm inhibitors. The exts. are preferably converted into spontaneously-dispersing concns. Germinated 750 g sunflower seeds were homogenized with 20 g mannitol, 15 g Invadin JFC 800 and 1500 mL water followed by centrifuging. The upper lipophilic layer was dissolved in tert-BuOMe. The soln. was filtered, followed by solvent evapn. and chromatog. purifn., to give a product, which had antitumor activity in mice with spontaneous adenocarcinoma. The semisynthetic prepn. of the sterol fatty acid esters, such as cholesteryl dodecenoate, is given.				
IT	3177-92-2, .beta.-Sitosterol linolenate RL: BIOL (Biological study) (from plant seed ext., as neoplasm inhibitor)				
RN	3177-92-2 CAPLUS				
CN	Stigmast-5-en-3-ol, 9,12,15-octadecatrienoate, [3.beta.(9Z,12Z,15Z)]- (9CI) (CA INDEX NAME)				

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=> D L44 BIB ABS HITSTR 8

L44 ANSWER 8 OF 31 CAPLUS COPYRIGHT 2000 ACS

AN 1994:319420 CAPLUS

DN 120:319420

TI 29-Hydroxymangiferonic acid from *Mangifera indica*

AU Anjaneyulu, V.; Babu, J. Suresh; Connolly, J. D.

CS Sch. Chem., Andhra Univ., Waltair, 530 003, India

SO Phytochemistry (1994), 35(5), 1301-3

CODEN: PYTCAS; ISSN: 0031-9422

DT Journal

LA English

AB From the stem bark of *Mangifera indica* (var/cv Himsagar), a new triterpenoid, 29-hydroxymangiferonic acid

(3-oxo-29-hydroxycycloart-24E-en-

36-oic acid) besides several known triterpenoids and steroids have been isolated. The structure of the new triterpenoid was elucidated by spectroscopic methods.

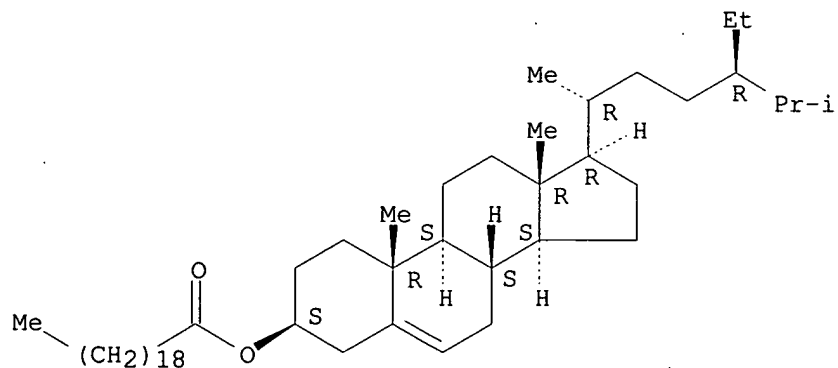
IT 59015-74-6, Sitosterol 3.β.-arachidate

RL: BIOL (Biological study)

(from *Mangifera indica*)

RN 59015-74-6 CAPLUS

CN Stigmast-5-en-3-ol, eicosanoate, (3.β.)- (9CI) (CA INDEX NAME)



=> D L44 BIB ABS HITSTR 28

L44 ANSWER 28 OF 31 CAPLUS COPYRIGHT 2000 ACS

AN 1982:118975 CAPLUS

DN 96:118975

TI Terpenes. Part 263. Campesteryl behenate, a chemical character of the liverwort genus Calypogeia

AU Benes, Ivan; Beizae, Nadezda; Vanek, Tomas; Vana, Jiri; Herout, Vlastimil

CS Inst. Org. Chem. Biochem., Czechoslovak Acad. Sci., Prague, 166 10/6, Czech.

SO Phytochemistry (1981), 20(10), 2438-9

CODEN: PYTCAS; ISSN: 0031-9422

DT Journal

LA English

AB Campesteryl behenate (I) has been isolated from all species of the title genus so far studied, which suggests that I is a characteristic feature of

this liverwort genus.

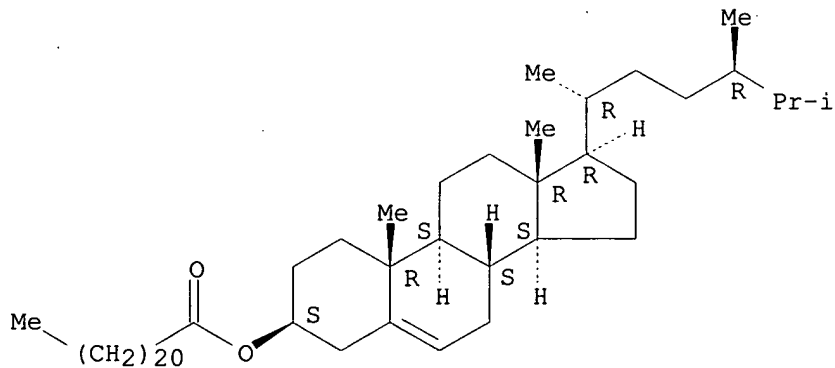
IT 81053-28-3

RL: BIOL (Biological study)
(from Calypogeia species)

RN 81053-28-3 CAPLUS

CN Ergost-5-en-3-ol, docosanoate, (3.beta.,24R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> D L44 BIB ABS HITSTR 22

L44 ANSWER 22 OF 31 CAPLUS COPYRIGHT 2000 ACS

AN 1986:531638 CAPLUS

DN 105:131638

TI Fatty acid composition of individual plasma steryl esters in
phytosterolemia and xanthomatosis

AU Kuksis, A.; Myher, J. J.; Marai, L.; Little, J. A.; McArthur, R. G.;
Roncari, D. A. K.

CS Bant. Best Dep., Univ. Toronto, Toronto, ON, M5G 1L6, Can.

SO Lipids (1986), 21(6), 371-7

CODEN: LPDSAP; ISSN: 0024-4201

DT Journal

LA English

AB The fatty acid compn. of the individual plasma steryl esters was detd. in
a subject with phytosterolemia and xanthomatosis. In general, each fatty
acid was esterified to the same complement of sterols, and the esterified
sterols possessed a compn. comparable to that of the free plasma sterols,
which was comprised of about 75% cholesterol, 6% campesterol, 4%
22,23-dihydrobrassicasterol, and 15% .beta.-sitosterol. The fatty acid
compn. of the steryl esters differed from that of the 2-position of the
plasma phosphatidylcholines, which contained less palmitic and oleic and
more linoleic acid. The plasma cholesteryl and plant steryl esters in
phytosterolemia may originate from both synthesis in plasma via the
lecithin-cholesterol acyltransferase and synthesis in tissues via the
acylCoA-cholesterol acyltransferase.

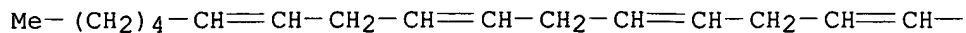
IT 104061-53-2 104076-89-3

RL: ADV (Adverse effect, including toxicity); BPR (Biological process);
BIOL (Biological study); PROC (Process)
(of blood plasma, in phytosterolemia and xanthomatosis in human)

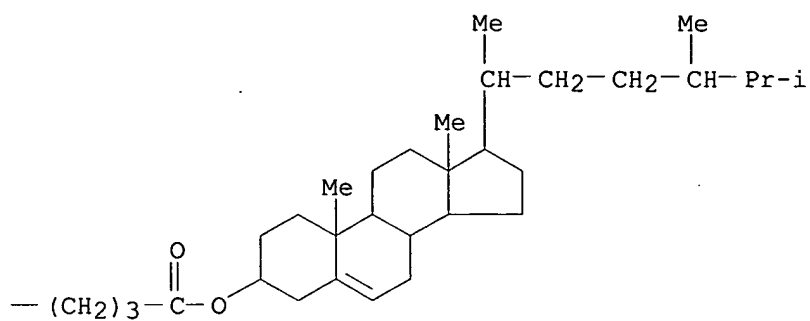
RN 104061-53-2 CAPLUS

CN Ergost-5-en-3-ol, 5,8,11,14-eicosatetraenoate, [3.beta.(5Z,8Z,11Z,14Z)]-
(9CI) (CA INDEX NAME)

PAGE 1-A

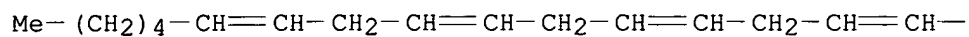


PAGE 1-B

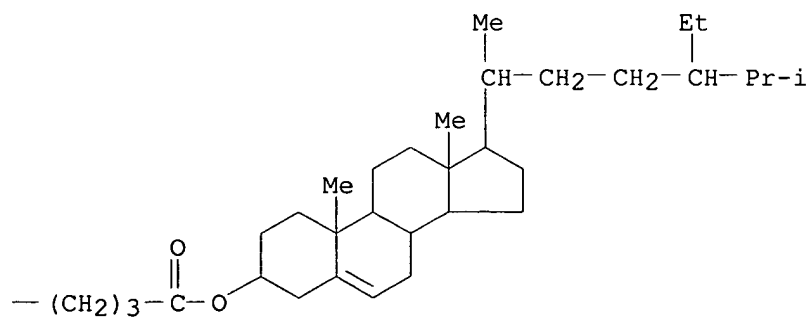


RN 104076-89-3 CAPLUS
 CN Stigmast-5-en-3-ol, 5,8,11,14-eicosatetraenoate,
 [3.beta.(5Z,8Z,11Z,14Z)]-
 (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



=> D L44 BIB ABS HITSTR 20

L44 ANSWER 20 OF 31 CAPLUS COPYRIGHT 2000 ACS

AN 1987:571916 CAPLUS

DN 107:171916

TI Strategy for the analysis of sterol esters from plant and animal tissues

AU Evershed, Richard P.; Male, Victoria L.; Goad, L. John

CS Dep. Biochem., Univ. Liverpool, Liverpool, L69 3BX, UK

SO J. Chromatogr. (1987), 400, 187-205

CODEN: JOCRAM; ISSN: 0021-9673

DT Journal

LA English

AB Methods are described for the anal. of intact sterol esters present in complex mixts. isolated from plant or animal tissues. A preliminary examn. by anal. TLC and capillary column gas chromatog.-mass spectrometry (GC-MS) under electron impact (EI) ionization reveals the complexity of the mixt. and the nature of the sterol moieties. Preparative TLC is then utilized to sep. the sterol esters into two broad groups, contg. fatty acyl moieties of shorter (C2-C8) or longer chain length (C10-C22). The shorter-chain fatty acyl sterol esters are sepd. by adsorption HPLC on a LiChrosorb Silica-60 column. The sterol esters with longer-chain fatty acyl moieties are analyzed by reversed-phase HPLC on either an

Ultrasphere

ODS, 5- μ m, or a S3 Spherisorb ODS, 3- μ m, column. Sterol esters with

unsatd. fatty acyl moieties are eluted with the shorter-chain fatty acyl sterol esters. The presence of the unsatd. fatty acyl esters can be monitored by anal. argentation TLC, which will also reveal the degree of unsatn. The sterol esters are fractionated into the satd., mono-, di-, tri-, and polyene acyl types by preparative medium-pressure liq. chromatog. on a column of 10% AgNO₃-silica gel. Each of these sterol ester types can then be resubmitted to reversed-phase HPLC or analyzed by GC-MS on a short fused-silica capillary column with a bonded phase of the OV-1 type. GC-MS on a magnetic-sector instrument under neg.-ion chem. ionization conditions with ammonia as the reagent gas produces fragment ions for both the sterol and fatty acyl moieties, thus permitting identification of the individual intact sterol esters. These various methods are illustrated by analyses of the sterol ester mixts. obtained from human plasma, barley seedlings, palm oil, and rape seed oil.

IT 3177-92-2, Sitosterol linolenate 59015-74-6, Sitosterol

arachidate 110671-71-1, Campesterol arachidate

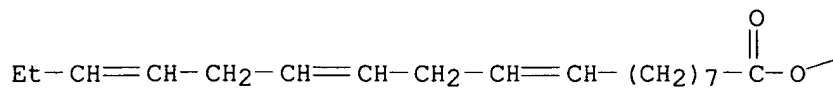
RL: ANT (Analyte); ANST (Analytical study)

(sepn. of, by reversed-phase HPLC)

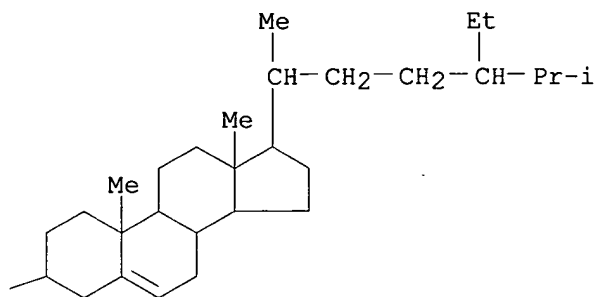
RN 3177-92-2 CAPLUS

CN Stigmast-5-en-3-ol, 9,12,15-octadecatrienoate, [3.beta.(9Z,12Z,15Z)]-(9CI) (CA INDEX NAME)

PAGE 1-A



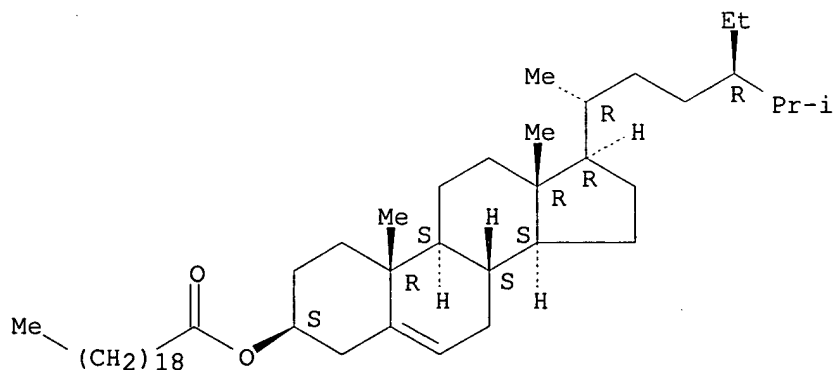
PAGE 1-B



RN 59015-74-6 CAPLUS

CN Stigmast-5-en-3-ol, eicosanoate, (3.beta.)- (9CI) (CA INDEX NAME)

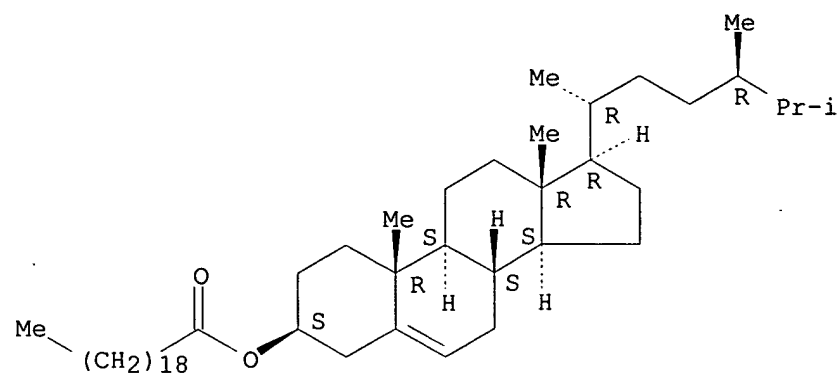
Absolute stereochemistry.



RN 110671-71-1 CAPLUS

CN Ergost-5-en-3-ol, eicosanoate, (3.beta., 24R)- (9CI) (CA INDEX NAME)

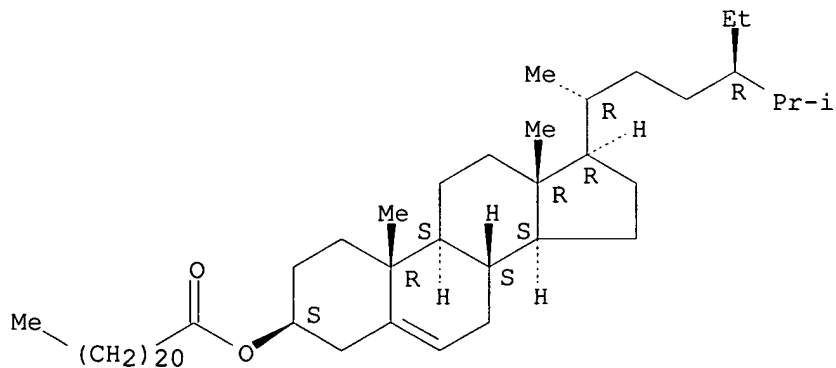
Absolute stereochemistry.



=> D L44 BIB ABS HITSTR 19

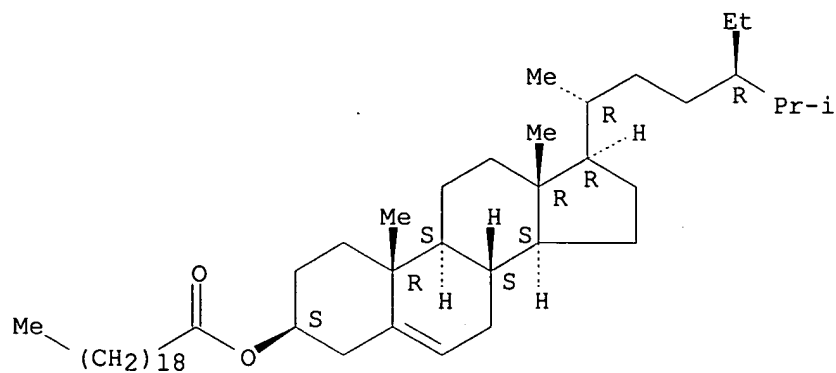
L44 ANSWER 19 OF 31 CAPLUS COPYRIGHT 2000 ACS
AN 1988:164680 CAPLUS
DN 108:164680
TI Anthraquinones and terpenoids from *Cassia javanica* leaves
AU Chaudhuri, Kakoli; Chawla, H. Mohindra
CS Chem. For. Prod. Branch, For. Res. Inst. Coll., Dehra Dun, 248 006, India
SO J. Nat. Prod. (1987), 50(6), 1183
CODEN: JNPRDF; ISSN: 0163-3864
DT Journal
LA English
AB Exts. of leaves of *C. javanica* gave nonacosane, triacontane, butyrospermone, .beta.-sitosterol palmitate, .beta.-sitosterol behenate, behenic acid, .beta.-amyrin palmitate, .beta.-sitosterol arachidate, emodin, rhein, chrysophanic acid, and kaempferol-3-O-.beta.-D-glucosyl-6-O-.alpha.-L-rhamnopyranose.
IT 22554-56-9, .beta.-Sitosterol behenate 59015-74-6
RL: BOC (Biological occurrence); BIOL (Biological study); OCCU (Occurrence)
(of *Cassia javanica* leaves)
RN 22554-56-9 CAPLUS
CN Stigmast-5-en-3-ol, docosanoate, (3.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 59015-74-6 CAPLUS
CN Stigmast-5-en-3-ol, eicosanoate, (3.beta.)- (9CI) (CA INDEX NAME)

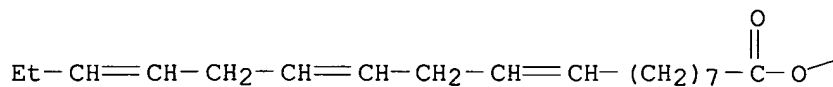
Absolute stereochemistry.



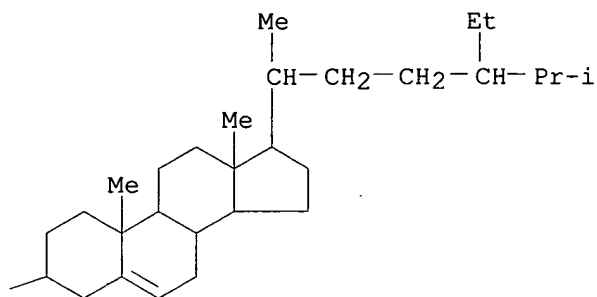
=> D L44 BIB ABS HITSTR 18

L44 ANSWER 18 OF 31 CAPLUS COPYRIGHT 2000 ACS
AN 1989:230383 CAPLUS
DN 110:230383
TI Characterization of corn oil, soybean oil and sunflowerseed oil nonpolar material
AU Trost, Vernon W.
CS Best Foods Res. Eng. Cent., Union, NJ, 07083, USA
SO JAOCs, J. Am. Oil Chem. Soc. (1989), 66(3), 325-33
CODEN: JJASDH
DT Journal
LA English
AB Normal-phase preparative and semi-preparative liq. chromatog. were used to isolate fractions of varying polarity from corn, soybean, and sunflower oils. The compn. of a fraction less polar than triglycerides was detd. by isolating the individual "peaks" of a semi-preparative sepn. by using as starting material the mix of compds. obtained from a large-scale sepn. These peaks were then analyzed by high performance liq. chromatog. (LC), gas chromatog. (GC), and mass-spectrometry (MS) with and without GC, in both electron impact (EI) and chem. ionization (CI) modes, and C13 NMR. Semi-quant. data were obtained for many of the components found in these semi-preparative isolates including hydrocarbons, steryl esters, triterpenyl esters, phytyl esters and geranylgeranyl esters. The wt. percent and compn. of the preparative fraction differed substantially among the 3 oils. Corn oil had the greatest amt., at 1.25% of the starting oil, and was composed mostly of steryl and triterpenyl esters. Sunflower oil, at 0.7%, and soybean oil, at 0.3%, had a greater variety in that branched chain esters were included with the steryl-triterpenyl distributions.
IT 3177-92-2 94365-87-4, Campesteryl linolenate
120707-25-7, Dihydrobrassicasteryl linolenate
RL: BIOL (Biological study)
(of soybean oil)
RN 3177-92-2 CAPLUS
CN Stigmast-5-en-3-ol, 9,12,15-octadecatrienoate, [3.beta.(9Z,12Z,15Z)]-(9CI) (CA INDEX NAME)

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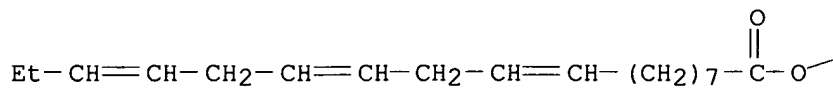
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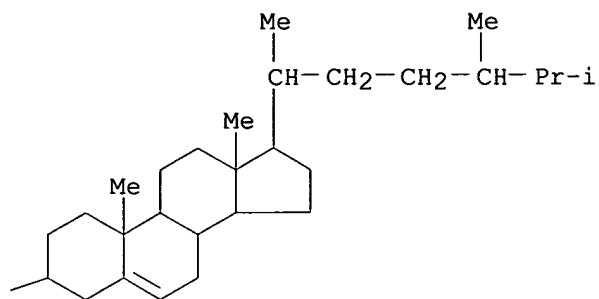
RN 94365-87-4 CAPLUS

CN Ergost-5-en-3-ol, 9,12,15-octadecatrienoate, [3.beta.(9Z,12Z,15Z),24R]-(9CI) (CA INDEX NAME)

PAGE 1-A



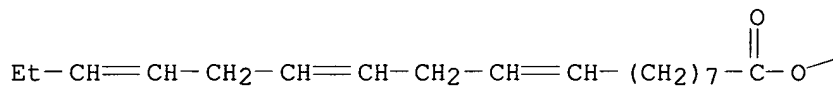
PAGE 1-B



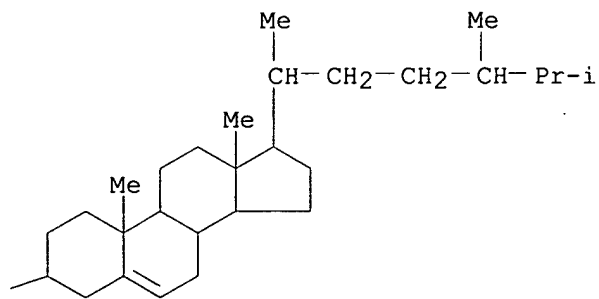
RN 120707-25-7 CAPLUS

CN Ergost-5-en-3-ol, 9,12,15-octadecatrienoate, [3.beta.(9Z,12Z,15Z)]- (9CI)
(CA INDEX NAME)

PAGE 1-A



PAGE 1-B



=> D L44 BIB ABS HITSTR 16

L44 ANSWER 16 OF 31 CAPLUS COPYRIGHT 2000 ACS

AN 1990:437710 CAPLUS

DN 113:37710

TI Maize pollen lipids

AU Bianchi, Giorgio; Murelli, Carla; Ottaviano, Ercole

CS Dip. Chim. Org., Pavia, 27100, Italy

SO Phytochemistry (1990), 29(3), 739-44

CODEN: PYTCAS; ISSN: 0031-9422

DT Journal

LA English

AB The CHCl₃ extractives of 4 wild selections of Zea mays (corn) pollen were sepd. quant. into chem. classes and the components of each class were identified. Alkanes, alkenes, fatty acids, triterpene esters, and triglycerides were the main constituents of the lipid exts. The 2 hydrocarbon classes were in a ratio close to 1:1; pentacosane, heptacosane, and nonacosane were dominant among the alkanes, whereas alkenes showed major homologs 2 carbon atoms longer. Free fatty acids, 8-22% of the total, contained predominantly palmitic (16:0), stearic (18:0), oleic (18:1), linoleic (18:2), and lower amts. of palmitoleic (16:1) and linolenic (18:3) acids. Triglycerides and triterpene esters accounted for 17-31% and 5-34%, resp. The former class comprised 3 homologous series, the latter contained tetracyclic and pentacyclic triterpenes esterified with C16 and C18 fatty acids. Free triterpenols and linear esters were also found in pollen lipids. These data are discussed in relation to pollen biochem. and in regard to the natural functions of the lipid classes found.

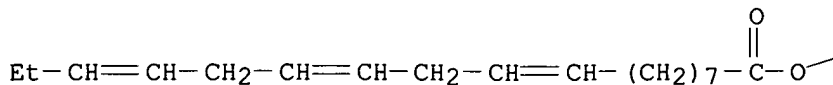
IT 94365-87-4, Campesteryl linolenate

RL: BIOL (Biological study)
(of pollen of corn)

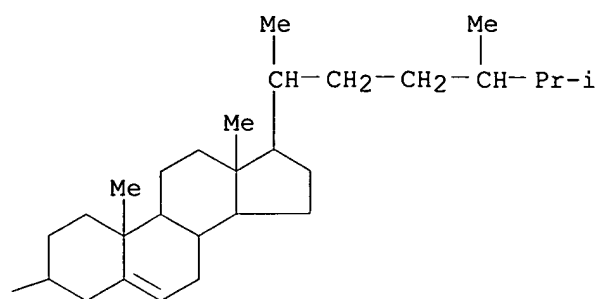
RN 94365-87-4 CAPLUS

CN Ergost-5-en-3-ol, 9,12,15-octadecatrienoate, [3.beta.(9Z,12Z,15Z),24R]-(9CI) (CA INDEX NAME)

PAGE 1-A



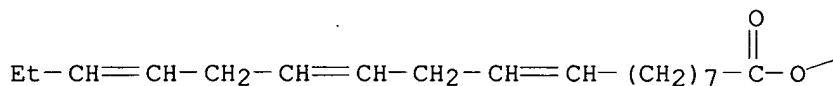
PAGE 1-B



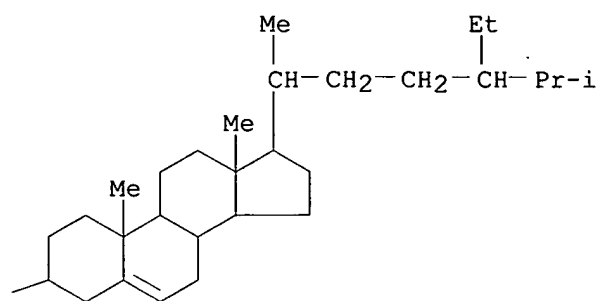
=> D L44 BIB ABS HITSTR 15

L44 ANSWER 15 OF 31 CAPLUS COPYRIGHT 2000 ACS
AN 1990:494783 CAPLUS
DN 113:94783
TI Mass spectrometry of sterol and triterpenoid esters from leaves of cotton
AU Rashkes, Ya. V.; Khidyrova, N. K.; Rashkes, A. M.; Shakhidoyatov, Kh. M.
CS Inst. Khim. Rastit. Veshchestv, Tashkent, USSR
SO Khim. Prir. Soedin. (1990), (2), 208-15
CODEN: KPSUAR; ISSN: 0023-1150
DT Journal
LA Russian
AB Leaves collected during cotton ripening in Sept. contained 45 sito-, stigma-, campe-, and brassicasterol, 24-ethylidene- and 24-methylencholesterol, cholesterol, and amyirin esters with C12-30 satd. and unsatd. aliph. acids. The main esterifying acids were palmitic and linolenic. Free sito-, stigma- and campesterol, 24-ethylidencholesterol, cholesterol, and amyirin also were found.
IT 3177-92-2
RL: BOC (Biological occurrence); BIOL (Biological study); OCCU (Occurrence)
(of cotton leaves)
RN 3177-92-2 CAPLUS
CN Stigmast-5-en-3-ol, 9,12,15-octadecatrienoate, [3.beta.(9Z,12Z,15Z)]-(9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



=> D L44 BIB ABS HITSTR 5

L44 ANSWER 5 OF 31 CAPLUS COPYRIGHT 2000 ACS

AN 1998:199671 CAPLUS

DN 128:261964

TI Ultramicroemulsions from spontaneously dispersible concentrates with antitumor, antiviral, virucidal, and antiparasitic esters of bioflavonoid compounds

IN Eugster, Carl; Eugster, Conrad Hans

PA Marigen S.A., Switz.; Eugster, Carl; Eugster, Conrad Hans

SO PCT Int. Appl., 50 pp.

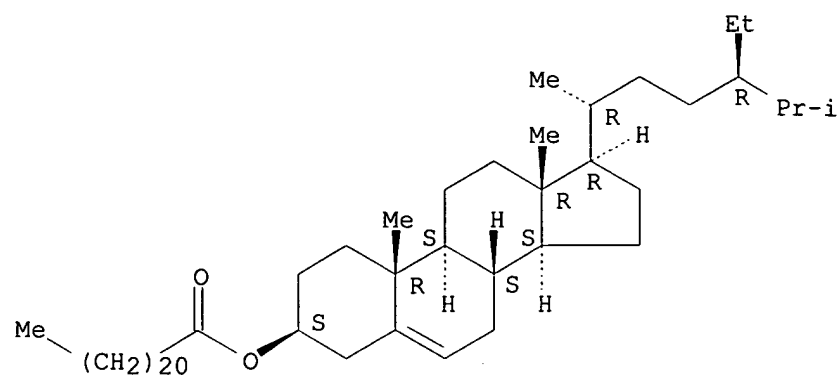
CODEN: PIXXD2

DT Patent

LA German

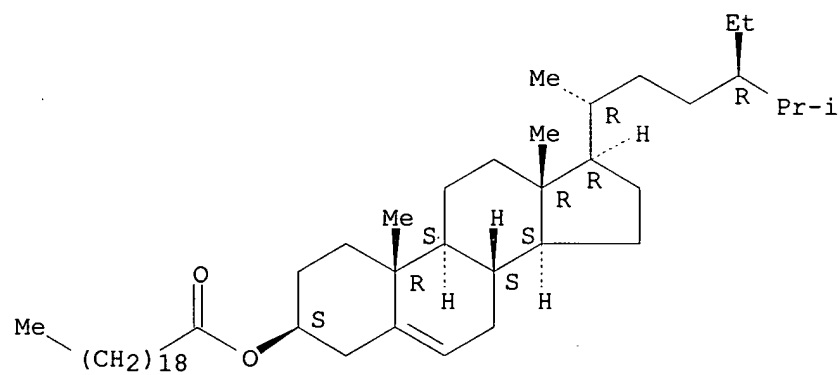
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	WO 9811889	A1	19980326	WO 1997-CH168	19970428
	W: US				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT,				
SE	WO 9811876	A1	19980326	WO 1997-CH169	19970428
	W: US				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT,				
SE	EP 862427	A1	19980909	EP 1997-917205	19970428
	R: DE, FR, GB, IT				
	EP 863746	A1	19980916	EP 1997-917206	19970428
	R: DE, FR, GB, IT				
PRAI	WO 1996-CH323		19960918		
	WO 1997-CH168		19970428		
	WO 1997-CH169		19970428		
OS	MARPAT 128:261964				
AB	Spontaneously dispersible concs. of bioflavonoid esters are described which produce aq. ultramicroemulsions with antitumor, antiviral, virucidal, and antiparasitic activity. These ultramicroemulsions are useful for producing medicaments effective against viral and parasitic illnesses, tumors, eczema, and psoriasis, as well as for ongoing tumor prophylaxis and for enhanced absorption of exogenous activators and metabolic modulators and regulators. The bioflavonoid esters are enclosed within surfactant micelles, which facilitate entry of the compds. into cells. The surfactant is preferably nonionic or amphoteric. Thus, a multiple-unit conc. was prepd. by granulating Metolose 90 SH-4000 90.0, Avicel PH-101 80.3, 2% Marigenol conc. of e.g. quercetin pentapalmitate 139.4, and Aerosil 200 80.3 g with EtOH, sieving, drying, and enteric coating with Aqoat AS-HG.				
IT	22554-56-9 59015-74-6, .beta.-Sitosteryl arachidate RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (ultramicroemulsions from spontaneously dispersible concs. with antitumor, antiviral, virucidal, and antiparasitic esters of bioflavonoid compds.)				
RN	22554-56-9 CAPLUS				
CN	Stigmast-5-en-3-ol, docosanoate, (3.beta.)- (9CI) (CA INDEX NAME) Searched by John Dantzman 308-4488				



AN	55015 71 3 CH203
CN	Stigmast-5-en-3-ol, eicosanoate, (3.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> D L44 BIB ABS HITSTR 5

L44 ANSWER 5 OF 31 CAPLUS COPYRIGHT 2000 ACS

AN 1998:199671 CAPLUS

DN 128:261964

TI Ultramicroemulsions from spontaneously dispersible concentrates with antitumor, antiviral, virucidal, and antiparasitic esters of bioflavonoid compounds

IN Eugster, Carl; Eugster, Conrad Hans

PA Marigen S.A., Switz.; Eugster, Carl; Eugster, Conrad Hans

SO PCT Int. Appl., 50 pp.

CODEN: PIXXD2

DT Patent

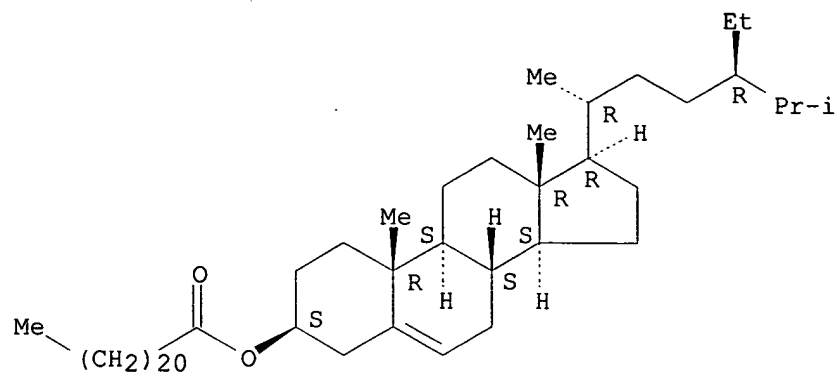
LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	WO 9811889	A1	19980326	WO 1997-CH168	19970428
	W: US				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT,				
SE	WO 9811876	A1	19980326	WO 1997-CH169	19970428
	W: US				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT,				
SE	EP 862427	A1	19980909	EP 1997-917205	19970428
	R: DE, FR, GB, IT				
	EP 863746	A1	19980916	EP 1997-917206	19970428
	R: DE, FR, GB, IT				
PRAI	WO 1996-CH323		19960918		
	WO 1997-CH168		19970428		
	WO 1997-CH169		19970428		
OS	MARPAT 128:261964				
AB	Spontaneously dispersible concs. of bioflavonoid esters are described which produce aq. ultramicroemulsions with antitumor, antiviral, virucidal, and antiparasitic activity. These ultramicroemulsions are useful for producing medicaments effective against viral and parasitic illnesses, tumors, eczema, and psoriasis, as well as for ongoing tumor prophylaxis and for enhanced absorption of exogenous activators and metabolic modulators and regulators. The bioflavonoid esters are enclosed within surfactant micelles, which facilitate entry of the compds. into cells. The surfactant is preferably nonionic or amphoteric. Thus, a multiple-unit conc. was prepd. by granulating Metolose 90 SH-4000 90.0, Avicel PH-101 80.3, 2% Marigenol conc. of e.g. quercetin pentapalmitate 139.4, and Aerosil 200 80.3 g with EtOH, sieving, drying, and enteric coating with Aqoat AS-HG.				
IT	22554-56-9 59015-74-6, .beta.-Sitosteryl arachidate RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (ultramicroemulsions from spontaneously dispersible concs. with antitumor, antiviral, virucidal, and antiparasitic esters of bioflavonoid compds.)				
RN	22554-56-9 CAPLUS				
CN	Stigmast-5-en-3-ol, docosanoate, (3.beta.)- (9CI) (CA INDEX NAME)				

Searched by John Dantzman 308-4488

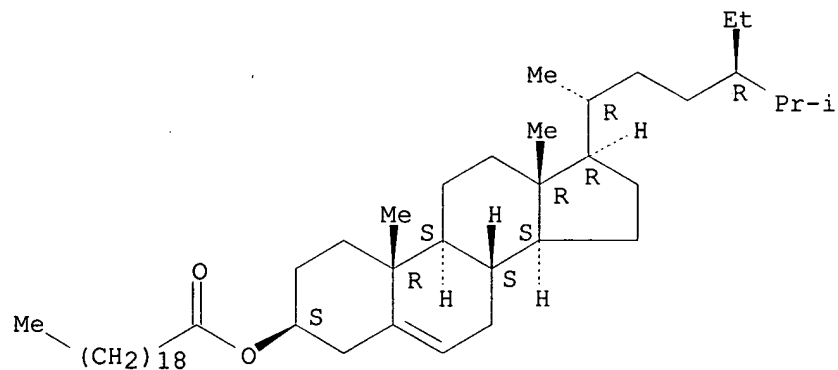
Absolute stereochemistry.



RN 59015-74-6 CAPLUS

CN Stigmast-5-en-3-ol, eicosanoate, (3.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> D L44 BIB ABS HITSTR 4

L44 ANSWER 4 OF 31 CAPLUS COPYRIGHT 2000 ACS

AN 1998:208538 CAPLUS

DN 128:266238

TI Ultramicroemulsions from spontaneously dispersible concentrates of esters of baccatin III derivatives with antitumor and antiviral effect

IN Eugster, Carl; Eugster, Conrad Hans

PA Marigen S.A., Switz.; Eugster, Carl; Eugster, Conrad Hans

SO PCT Int. Appl., 58 pp.

CODEN: PIXXD2

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	WO 9813359	A1	19980402	WO 1996-CH329	19960924
	W: US				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT,				
SE	EP 868422	A1	19981007	EP 1996-930006	19960924
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				
	IE, FI				

PRAI WO 1996-CH329 19960924

OS MARPAT 128:266238

AB Esters of baccatin III, 10-deacetylbaccatin III, and 14-hydroxy-10-deacetylbaccatin III with long-chain fatty acids are prepd. by conventional procedures and incorporated into spontaneously dispersible concs. for use in prodn. of medicaments with few side effects and with antitumor, antiviral, and virucidal effects for controlling psoriasis and eczema, for tumor treatment and tumor therapy, for treating viral diseases, and for increasing the absorption of exogenous activators, modulators, and regulators. The practically water-insol., highly agglomerated esters are formulated with suitable solubilizers, surfactants, and cosurfactants to promote formation of micelles

surrounded

by a boundary layer of surfactant and cosurfactant; the micellar structure

facilitates diffusion of the esters through the membranes of tumor and host cells and viral coats. Suitable surfactants are phosphate ester surfactants such as Soprophor FL, betaines, and multifunctional glucose derivs. such as methylglucose sesquistearate. Cosurfactants

(hydrotropes)

may include aliph. esters, PEG monoesters and monoethers, ethoxylated glycerin esters, heterocyclic compds., CHAPS, or terpenoid esters. Thus, a Marigenol conc. of a baccatin III deriv. ester 139.4 was granulated

with

Metolose 90 SH-4000 90.0, Avicel PH-101 80.3, Aerosil 200 80.3, and EtOH 110 g and the granules were sieved and dried at 40.degree..

Microemulsions prepd. from the ester-contg. concs. in water, 5% glucose soln., or Ringer's soln. protected MT4 cells (immortalized T-cells) from the cytopathic effects of HIV infection.

IT 59015-74-6, .beta.-Sitosteryl arachidate

RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

Searched by John Dantzman 308-4488

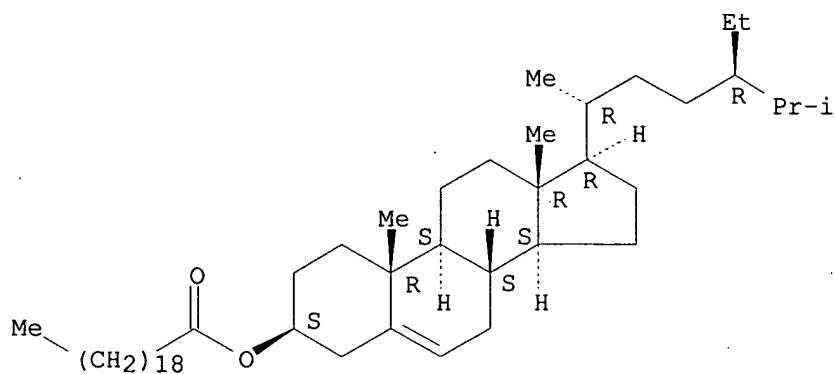
of (ultramicroemulsions from spontaneously dispersible concs. of esters

baccatin III derivs. with antitumor and antiviral effect)

RN 59015-74-6 CAPLUS

CN Stigmast-5-en-3-ol, eicosanoate, (3.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> D L44 BIB ABS HITSTR 2

L44 ANSWER 2 OF 31 CAPLUS COPYRIGHT 2000 ACS

AN 1998:527209 CAPLUS

DN 129:166219

TI Ultramicroemulsions of spontaneously dispersible concentrates containing antitumorally, antivirally, and antiparasitically active esters of pentacyclic triterpenes

IN Eugster, Carl; Eugster, Conrad Hans

PA Marigen S.A., Switz.

SO PCT Int. Appl., 59 pp.

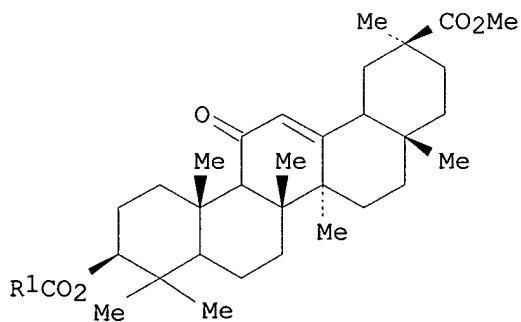
CODEN: PIXXD2

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9832443	A1	19980730	WO 1997-CH23	19970124
	W: JP, US				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT,				
SE	EP 902685	A1	19990324	EP 1997-900535	19970124
	R: DE, FR, GB, IT				
PRAI	WO 1997-CH23		19970124		
OS	MARPAT 129:166219				
GI					



AB Stable aq. ultramicroemulsions prepd. from spontaneously dispersible Marigenol concs. of pentacyclic triterpene compds. related to betulin, enoxolone, oleanolic acid, lupeol, and ursolic acid, such as I (R1 =

C3-31

alkyl or alkenyl, C17-23 alkapolienyl, retinoyl) are useful for systemic treatment of tumors, eczema, psoriasis, viral and parasitic infections, and metabolic and immune disorders, as well as for lasting tumor prophylaxis and enhanced absorption of exogenous activators, modulators, and regulators. These triterpenes form globular micelles with a hydrodynamic radius of 2.2-3.0 nm having a surfactant shell. The dispersible conc. comprises .gtoreq.1 pentacyclic triterpene 0.1-10, synergistic pharmaceutical or cosmetic active agent 0-5, .gtoreq.1 hydrotrope or coemulsifier 1-25, .gtoreq.1 surfactant 5-90, (pro)vitamin

Searched by John Dantzman 308-4488

.ltoreq.10, and stabilizer, radical scavenger, biol. vector, permeation enhancer, carrier, and/or diluent .ltoreq.10 wt.%. Phosphate esters and betaines are preferred surfactants. Thus, enteric-coated micropellets were prepd. by granulating Metolose 90 SH-4000 90.0, Avicel PH-101 80.3, Marigenol conc. of 3-O-all-trans-retinoyl oleanolate 139.4, and Aerosil 200 80.3 g with EtOH, sieving, and drying; 44 wt. parts of the granules were coated with the Marigenol conc. 25 and Aqoat AS-HG + talc 31 parts. This compn. was cytotoxic to Py6 virus-infected 3T3 mouse fibroblasts at

a

diln. of 512,000 after 96 h exposure.

IT 22554-56-9 59015-74-6, .beta.-Sitosteryl arachidate

RL: BAC (Biological activity or effector, except adverse); THU

(Therapeutic use); BIOL (Biological study); USES (Uses)

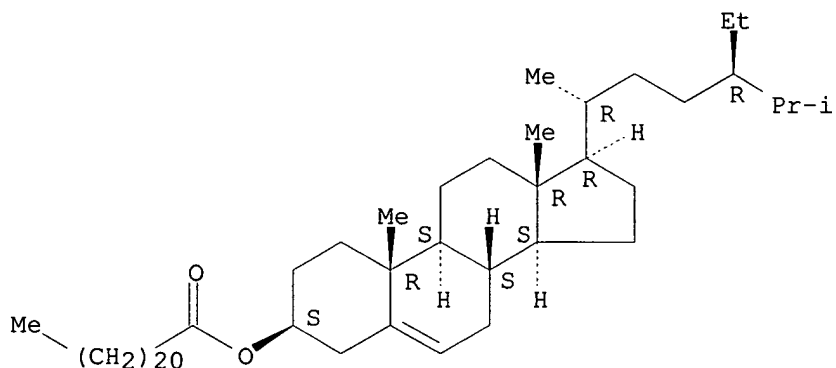
(ultramicroemulsions of spontaneously dispersible concs. contg.

antitumorally, antivirally, and antiparasitically active esters of pentacyclic triterpenes)

RN 22554-56-9 CAPLUS

CN Stigmast-5-en-3-ol, docosanoate, (3.beta.)- (9CI) (CA INDEX NAME)

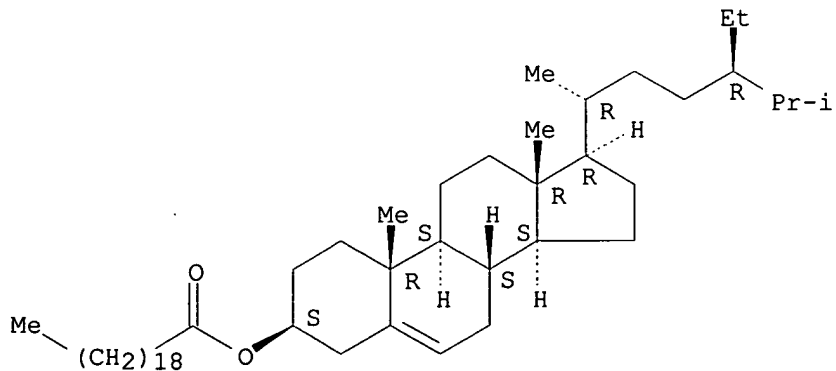
Absolute stereochemistry.



RN 59015-74-6 CAPLUS

CN Stigmast-5-en-3-ol, eicosanoate, (3.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> D L44 BIB ABS HITSTR

L44 ANSWER 1 OF 31 CAPLUS COPYRIGHT 2000 ACS

AN 1999:416035 CAPLUS

DN 131:243460

TI Enzymatic synthesis of steryl esters of polyunsaturated fatty acids

AU Shimada, Yuji; Hirota, Yoshinori; Baba, Takashi; Sugihara, Akio;

Moriyama,

Shigeru; Tominaga, Yoshio; Terai, Tadamasa

CS Osaka Municipal Technical Research Institute, Osaka, 536-8553, Japan

SO J. Am. Oil Chem. Soc. (1999), 76(6), 713-716

CODEN: JAOCA7; ISSN: 0003-021X

PB AOCs Press

DT Journal

LA English

AB Steryl esters of long-chain fatty acids have water-holding properties,
and

polyunsatd. fatty acids (PUFA) have various physiol. functions. Because
steryl ester of PUFA can be expected to have both features, we attempted
to synthesize steryl esters of PUFA by enzymic methods. Among lipases
used, *Pseudomonas* lipase was the most effective for the synthesis of
cholesteryl docosahexaenoate. When a mixt. of
cholesterol/docosahexaenoic

acid (3:1, mol/mol), 30% water, and 3000 units/g of lipase was stirred at
40.degree.C for 24 h, the esterification extent attained 89.5%. Under
the

same reaction conditions, cholesterol, cholestanol, and sitosterol were
also esterified efficiently with docosahexaenoic, eicosapentaenoic,
arachidonic, and .gamma.-linolenic acids.

IT **244258-49-9P**, Sitosteryl all-(Z)-4,7,10,13,16,19-
docosahexaenoate **244258-50-2P**, Sitosteryl all-(Z)-
eicosapentaenoate **244258-51-3P**, Sitosteryl

.gamma.-linolenoate

RL: BPN (Biosynthetic preparation); SPN (Synthetic preparation); BIOL
(Biological study); PREP (Preparation)

(enzymic synthesis of steryl esters of polyunsatd. fatty acids with
Pseudomonas lipases)

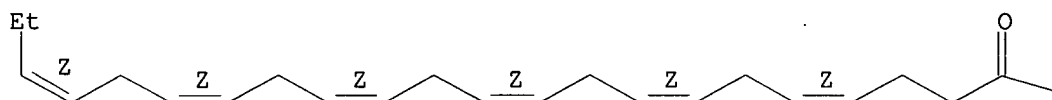
RN 244258-49-9 CAPLUS

CN Stigmast-5-en-3-ol, (4Z,7Z,10Z,13Z,16Z,19Z)-4,7,10,13,16,19-
docosahexaenoate, (3.beta.)- (9CI) (CA INDEX NAME)

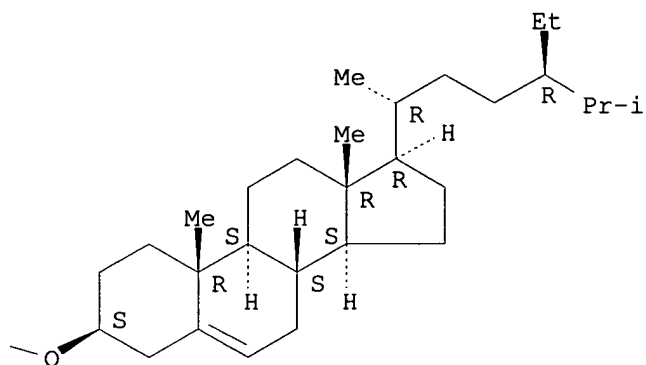
Absolute stereochemistry.

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



RN 244258-50-2 CAPLUS

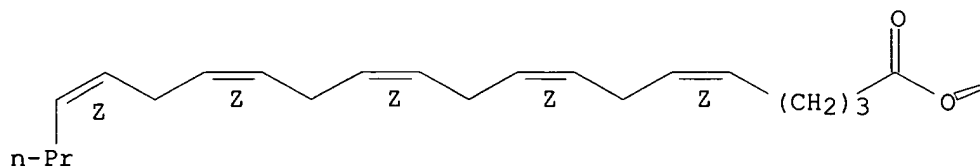
CN Stigmast-5-en-3-ol,

(5Z,8Z,11Z,14Z,17Z)-5,8,11,14,17-heneicosapentaenoate,
(3.beta.)- (9CI) (CA INDEX NAME)

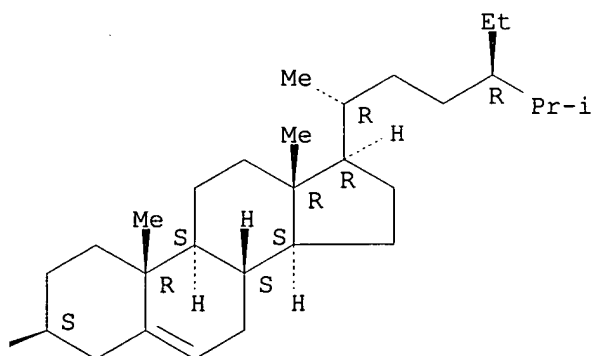
Absolute stereochemistry.

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



RN 244258-51-3 CAPLUS

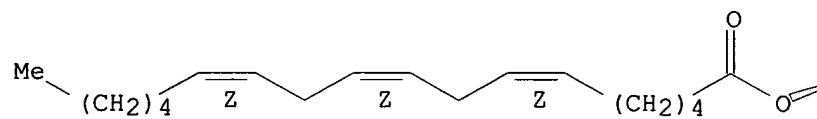
CN Stigmast-5-en-3-ol, (6Z,9Z,12Z)-6,9,12-octadecatrienoate, (3.beta.)-(9CI)

(CA INDEX NAME)

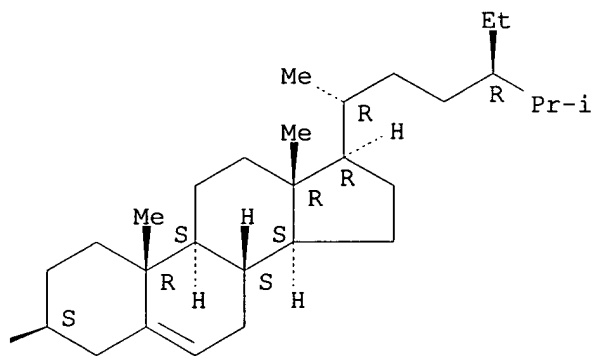
Absolute stereochemistry.

Double bond geometry as shown.

PAGE 1-A



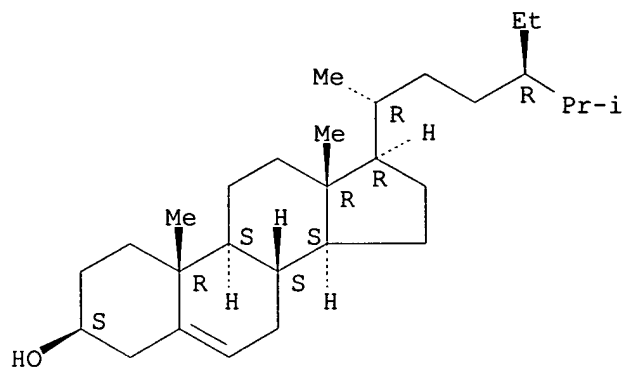
PAGE 1-B



=> D L12

L12 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2000 ACS
RN 83-46-5 REGISTRY
CN Stigmast-5-en-3-ol, (3.beta.)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Nimbosterol (6CI)
CN Stigmast-5-en-3.beta.-ol (8CI)
OTHER NAMES:
CN (-)-.beta.-Sitosterol
CN (24R)-Ethylcholest-5-en-3.beta.-ol
CN .alpha.-Dihydrofucosterol
CN .beta.-Sitosterin
CN **.beta.-Sitosterol**
CN .DELTA.5-Stigmasten-3.beta.-ol
CN 22,23-Dihydrostigmasterol
CN 24.alpha.-Ethylcholesterol
CN Angelicin
CN Angelicin (steroid)
CN Azuprostat
CN Cinchol
CN Cupreol
CN Quebrachol
CN Rhamnol
CN SKF 14463
CN Sobatum
CN Stigmasterol, 22,23-dihydro-
FS STEREOSEARCH
DR 8003-23-4, 15764-35-9, 76772-70-8, 182512-23-8
MF C29 H50 O
CI COM
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA,
CAOLD, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMINFORMRX, CHEMLIST,
CSCHEM,
DDFU, DRUGU, EMBASE, HODOC*, IFICDB, IFIPAT, IFIUDB, IPA, MRCK*,
MSDS-OHS, NAPRALERT, NIOSHTIC, PIRA, PROMT, RTECS*, SPECINFO, TOXLINE,
TOXLIT, ULIDAT, USPATFULL, VETU
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.



8229 REFERENCES IN FILE CA (1967 TO DATE)
130 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
8238 REFERENCES IN FILE CAPLUS (1967 TO DATE)
12 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> D L13

L13 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2000 ACS

RN 83-48-7 REGISTRY

CN Stigmasta-5,22-dien-3-ol, (3.beta.,22E)- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Stigmasta-5,22-dien-3.beta.-ol (8CI)

OTHER NAMES:

CN (24S)-24-Ethylcholesta-5,22-dien-3.beta.-ol

CN (24S)-5,22-Stigmastadien-3.beta.-ol

CN .beta.-Stigmasterol

CN .DELTA.5,22-Stigmastadien-3.beta.-ol

CN .DELTA.5-Stigmasterol

CN 24-Ethyl-5,22-cholestadien-3.beta.-ol

CN Stigmasterin

CN **Stigmasterol**

FS STEREOSEARCH

DR 37571-80-5

MF C29 H48 O

CI COM

LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CABA,

CANCERLIT, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, DDFU, DRUGU, EMBASE, HODOC*, IFICDB, IFIPAT, IFIUDb, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, PIRA, PROMT, SPECINFO, TOXLINE, TOXLIT, USPATFULL, VETU

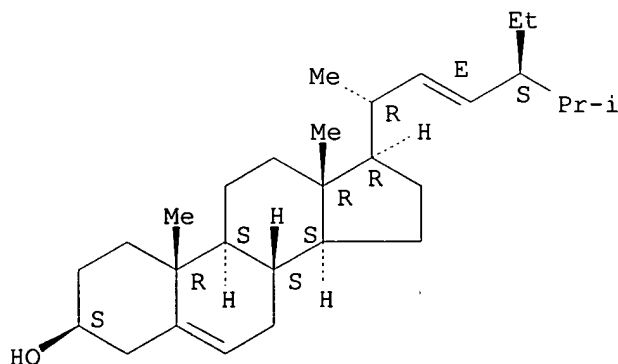
(*File contains numerically searchable property data)

Other Sources: EINECS**

(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.

Double bond geometry as shown.



3889 REFERENCES IN FILE CA (1967 TO DATE)

75 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

3892 REFERENCES IN FILE CAPLUS (1967 TO DATE)

59 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

Searched by John Dantzman

308-4488

QAZI

09/448356

Page 4

Searched by John Dantzman

308-4488

=> D L14

L14 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2000 ACS

RN 474-62-4 REGISTRY

CN Ergost-5-en-3-ol, (3.beta.,24R)- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN **Campesterol (6CI)**

CN Ergost-5-en-3.beta.-ol, (24R)- (8CI)

OTHER NAMES:

CN (24R)-5-Ergosten-3.beta.-ol

CN .DELTA.5-24-Isoergosten-3.beta.-ol

CN 24(R)-Methylcholesterol

CN 24.alpha.-Methyl-5-cholesten-3.beta.-ol

CN 24.alpha.-Methylcholesterol

CN Campesterin

FS STEREOSEARCH

DR 137764-28-4

MF C28 H48 O

CI COM

LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CABA,

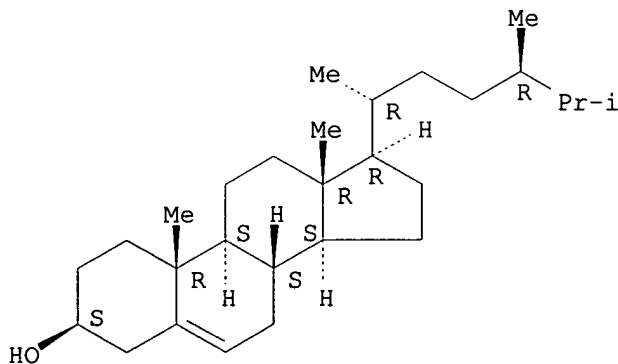
CANCERLIT, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CIN, CSCHEM, DDFU, DRUGU, EMBASE, HODOC*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, PIRA, PROMT, SPECINFO, TOXLINE, TOXLIT, USPATFULL, VETU

(*File contains numerically searchable property data)

Other Sources: EINECS**

(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.



2809 REFERENCES IN FILE CA (1967 TO DATE)

69 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

2811 REFERENCES IN FILE CAPLUS (1967 TO DATE)

37 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> D BIB ABS HITSTR 8

L45 ANSWER 8 OF 22 CAPLUS COPYRIGHT 2000 ACS

AN 1997:530223 CAPLUS

DN 127:160885

TI The fatty acid and sterol content of food composites of middle-aged men in

seven countries

AU De Vries, Jeanne H. M.; Jansen, Annemarie; Kromhout, Daan; Van De Bovenkamp, Peter; Van Staveren, Wija A.; Mensink, Ronald P.; Katan, Martijn B.

CS Department of Human Nutrition, Wageningen Agricultural University, Wageningen, 6703 HD, Neth.

SO J. Food Compos. Anal. (1997), 10(2), 115-141
CODEN: JFCAEE; ISSN: 0889-1575

PB Academic

DT Journal

LA English

AB Specific fatty acids and sterols in food composites from seven countries were analyzed. In the 1960s, groups of 8 to 49 men from 16 cohorts, ages 40-59 yr and living in the United States, Finland, the Netherlands,

Italy,

Greece, the former Yugoslavia, or Japan recorded their food intake. In 1987, we collected food composites representing the av. food intake per cohort sample in the 1960s. The foods were transported to the Netherlands, pooled, and centrally analyzed for energy, total fat, 42 fatty acids, cholesterol, and four plant sterols. The fat content ranged from 12% of total daily energy in the Tanushimaru, Japan, cohort to 50%

in

the U.S. cohort sample, and the polyunsatd. to satd. fat ratio ranged

from

0.17 in the east Finland cohort to 1.2 in Tanushimaru. The amt. of trans fatty acids with 16 or 18 carbon atoms varied between 0.2 g/day in Corfu, Greece, and 8.6 g/day in Zutphen, Netherlands, and that of .alpha.-linolenic acid between 0.8 g/day in Rome and 2.5 g/day in east Finland. The sum of **eicosapentaenoic** and docosahexanoic acid ranged from 0.1 (U.S. railroad) to 2.0 g/day (Ushibuka, Japan), and phytosterols from 170 (U.S. railroad) to 358 mg/day (Corfu, Greece).

Thus

the intake of various fatty acids and sterols with potential relevance

for

coronary heart disease occurrence varied 10-fold or more between cohorts. Our data can be used to generate new hypotheses about the causes of differences in incidence of diseases between countries.

IT 83-46-5 474-62-4, Campesterol

RL: BOC (Biological occurrence); BIOL (Biological study); OCCU (Occurrence)

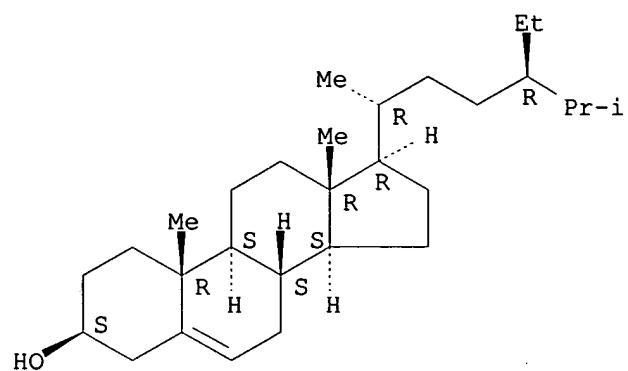
(fatty acid and sterol content of food composites of middle-aged men in

seven countries)

RN 83-46-5 CAPLUS

CN Stigmast-5-en-3-ol, (3.beta.)- (9CI) (CA INDEX NAME)

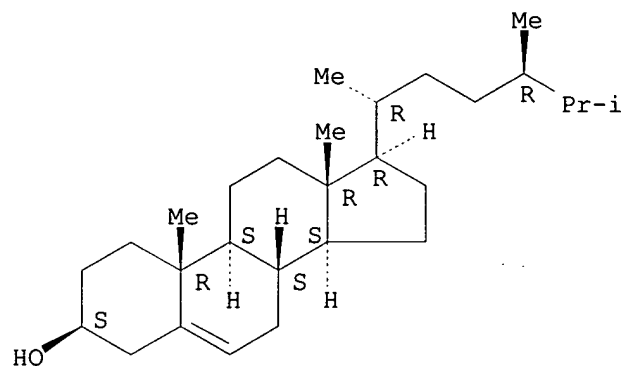
Absolute stereochemistry.



RN 474-62-4 CAPLUS

CN Ergost-5-en-3-ol, (3.beta.,24R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L6 ANSWER 6 OF 19 CAPLUS COPYRIGHT 1999 ACS
 AN 1994:245603 CAPLUS
 DN 120:245603
 TI Dicarboxylic acid esters of steroids and vitamins
 IN Eugster, Carl; Eugster, Conrad Hans; Haldemann, Walter; Rivara, Giorgio;
 Zina, Giuseppe
 PA Marigen S.A., Switz.
 SO Patentschrift (Switz.), 38 pp.
 CODEN: SWXXAS
 DT Patent
 LA German
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CH 681891	A	19930615	CH 1991-3159	19921009
	DE 4319492	A1	19940414	DE 1993-4319492	19930611
	GB 2285805	A1	19950726	GB 1994-882	19940118
PRAI	CH 1991-3159		19921009		

OS MARPAT 120:245603

AB Esters of satd. and unsatd. dicarboxylic acids with steroids and vitamin
 D

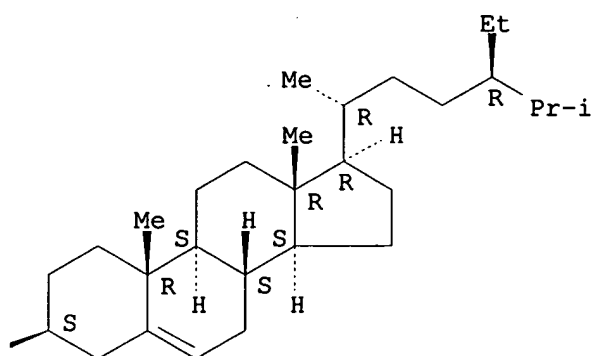
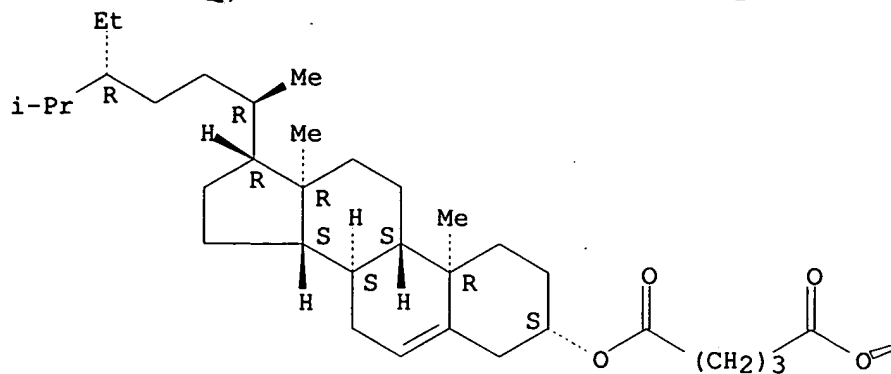
and E derivs. were prepd. for use as neoplasm inhibitors. Thus,
 bis(cholesteryl) azelaate (I) was prepd. by esterifying the acid chloride
 with cholesterol. In a plate diln. test with PY6 polyoma
 virus-transformed mouse cells I was active to a diln. of 1:19.2X106.

IT 65380-14-5P 65380-17-8P 65380-18-9P
 153023-62-2P 153023-63-3P 153023-66-6P
 153023-67-7P 153023-87-1P 153023-88-2P
 153023-89-3P 153023-90-6P 153023-91-7P
 153023-92-8P 153151-46-3P 153151-47-4P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)

RN 65380-14-5 CAPLUS

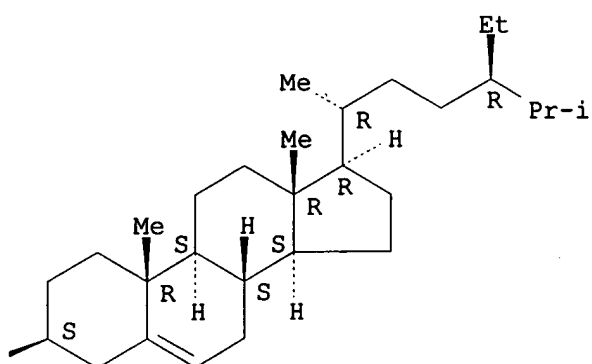
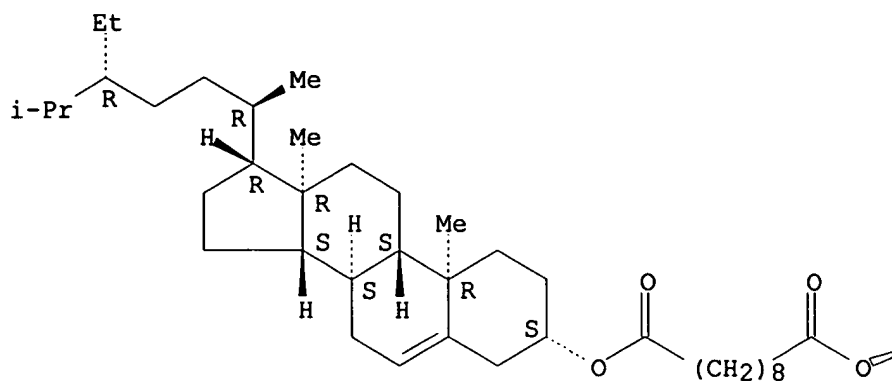
CN Stigmast-5-en-3-ol, pentanedioate, (3.beta.)-(3'.beta.)- (9CI) (CA INDEX
 NAME)

Absolute stereochemistry.



RN 65380-17-8 CAPLUS
 CN Stigmast-5-en-3-ol, nonanedioate, (3.beta.)-(3'.beta.)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 153023-62-2 CAPLUS

Stigmasta-5,22-dien-3-ol, decanedioate (2:1), (3.beta.,22E)-
(3'.beta.,22'E)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.

=> D L44 BIB ABS HITSTR 24

L44 ANSWER 24 OF 31 CAPLUS COPYRIGHT 2000 ACS

AN 1985:534906 CAPLUS

DN 103:134906

TI Hypocholesterolemic effects of eicosapentaenoic acid, phospholipids, and phytosterols in rats

AU Teshima, Shinichi; Kanazawa, Akio; Tokiwa, Sigeru; Imatanaka, Nobuya

CS Fac. Fish., Kagoshima Univ., Kagoshima, 890, Japan

SO Kagoshima Daigaku Suisangakubu Kiyo (1984), 33(1), 79-83

CODEN: KDSGA3; ISSN: 0453-087X

DT Journal

LA English

AB The effects of **eicosapentaenoic** acid methylester (I) [28061-45-2], .beta.-sitosterol (II) [83-46-5], fucosterol (III) [17605-67-3], Tapes phospholipids (phospholipids isolated from the short-necked clam), soybean lecithin, and chicken-egg lecithin on serum and liver cholesterol [57-88-5] levels were studied in rats. Supplementation of a 1.0% cholesterol-4.0% butter diet for 2 wk with 0.3% I, II, or III inhibited the elevation of cholesterol levels in both the serum and liver. However, dietary supplement with 0.3% I + 0.3% III did not have hypocholesterolemic effects in serum or liver. Tapes Phospholipids, soybean lecithin, and chicken-egg lecithin markedly elevated the serum cholesterol levels. On the other hand, Tapes phospholipids suppressed liver cholesterol levels.

=> D L44 BIB ABS HITSTR 23

L44 ANSWER 23 OF 31 CAPLUS COPYRIGHT 2000 ACS

AN 1986:106131 CAPLUS

DN 104:106131

TI Phytochemistry of common marcantial mosses, Marchantiopsida
 (Hepaticopsida). 2. Chemical composition of Calobryales and

Jungermaniales

AU Benesova, V.

CS Inst. Microbiol., Czech. Acad. Sci., Prague, Czech.

SO Rastit. Resur. (1985), 21(4), 523-9

CODEN: RRESA8; ISSN: 0033-9946

DT Journal; General Review

LA Russian

AB	A review with 50 refs. of the most characteristic chem. features of the Calobryales and Jungermanniales mosses. Sesqui- and diterpenoids are the most characteristic components of the Jungermanniales order, with the anastreptene and .beta.-barbatene being the common sesquiterpenes found generally in all species of this order. Azulenes and campesterol
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were the most common compds. of the Calypogeiaceae family of the Jungermanniales order. Apigenin glycosides were found in Calobryales order.

IT 81053-28-3

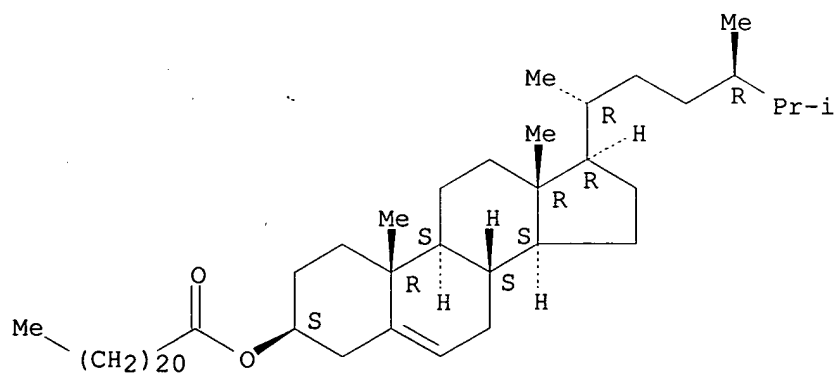
RL: BOC (Biological occurrence); BIOL (Biological study); OCCU (Occurrence)

(of Calypogeiaceae)

RN 81053-28-3 CAPLUS

CN	Ergost-5-en-3-ol, docosanoate, (3.beta.,24R)- (9CI)	(CA INDEX NAME)
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Absolute stereochemistry.



=> D L44 BIB ABS HITSTR 24

L44 ANSWER 24 OF 31 CAPLUS COPYRIGHT 2000 ACS
AN 1985:534906 CAPLUS
DN 103:134906
TI Hypocholesterolemic effects of eicosapentaenoic acid, phospholipids, and
phytosterols in rats
AU Teshima, Shinichi; Kanazawa, Akio; Tokiwa, Sigeru; Imatanaka, Nobuya
CS Fac. Fish., Kagoshima Univ., Kagoshima, 890, Japan
SO Kagoshima Daigaku Suisangakubu Kiyo (1984), 33(1), 79-83
CODEN: KDSGA3; ISSN: 0453-087X
DT Journal
LA English
AB The effects of **eicosapentaenoic** acid methylester (I)
[28061-45-2], .beta.-sitosterol (II) [83-46-5], fucosterol
(III) [17605-67-3], Tapes phospholipids (phospholipids isolated from the
short-necked clam), soybean lecithin, and chicken-egg lecithin on serum
and liver cholesterol [57-88-5] levels were studied in rats.
Supplementation of a 1.0% cholesterol-4.0% butter diet for 2 wk with 0.3%
I, II, or III inhibited the elevation of cholesterol levels in both the
serum and liver. However, dietary supplement with 0.3% I + 0.3% III did
not have hypocholesterolemic effects in serum or liver. Tapes
Phospholipids, soybean lecithin, and chicken-egg lecithin markedly
elevated the serum cholesterol levels. On the other hand, Tapes
phospholipids suppressed liver cholesterol levels.

=> D L44 BIB ABS HITSTR 25

L44 ANSWER 25 OF 31 CAPLUS COPYRIGHT 2000 ACS

AN 1985:58808 CAPLUS

DN 102:58808

TI Analysis of sterol esters by capillary gas chromatography-electron impact and chemical ionization-mass spectrometry

AU Lusby, William R.; Thompson, Malcolm J.; Kochansky, Jan

CS Insect Physiol. Lab., Agric. Res. Serv., Beltsville, MD, 20705, USA

SO Lipids (1984), 19(11), 888-901

CODEN: LPDSAP; ISSN: 0024-4201

DT Journal

LA English

AB Synthetic mixts. of C40 to C47 sterol esters in groups of 7 esters were effectively sepd. and analyzed by capillary gas chromatog.-mass spectrometry. Ammonia chem. ionization of all 20 sterol esters analyzed at a source block temp. of 120.degree. yielded (M+NH4)+ and (M+H-RCO2H)+ ions of high abundance or as base peak, thereby indirectly indicating the mol. wts. of the ester and the sterol and acid moieties. Ammonia CI spectra of all esters contg. a .DELTA.5-sterol moiety exhibited in addn. to the above 2 ions an M+NH4-RCO2H fragment. At a source block temp. of 150.degree., M+H-RCO2H fragment was the base peak for all esters, and there was little or no indication of an (M+NH4)+ adduct ion. Protonated mols. were not obsd. for any esters analyzed by methane or isobutane CI. Mol. ions of 3-14% intensity were obtained for only 3 of the esters analyzed by electron impact; they contained a .DELTA.7-bond in the sterol nucleus, and the acid moiety was either satd. normal or branched chain or contained a single double bond. The base peak was a function of both the acid and sterol moieties of the sterol ester. The esters contg. both satd. straight chain acid and satd. sterol moieties exhibited a base peak at m/z 215. The .DELTA.5-sterol esters with satd. branched or straight chain acid moieties exhibited base peaks at M-RCO2H. Other ions also

were

of diagnostic value.

IT 94365-87-4

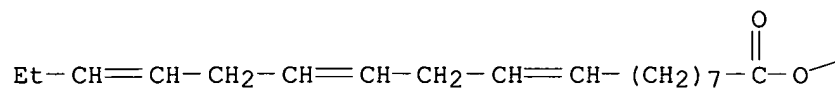
RL: ANT (Analyte); ANST (Analytical study)

(detection of, by capillary gas chromatog.-mass spectrometry)

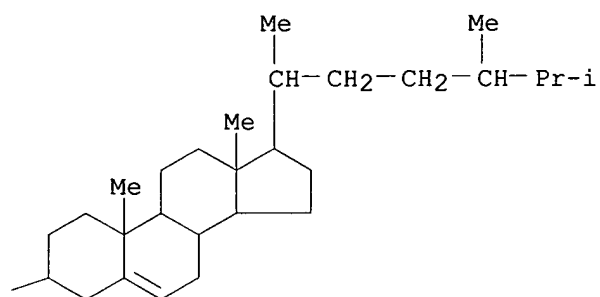
RN 94365-87-4 CAPLUS

CN Ergost-5-en-3-ol, 9,12,15-octadecatrienoate, [3.beta.(9Z,12Z,15Z),24R]-(9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



=> D L44 BIB ABS HITSTR 30

L44 ANSWER 30 OF 31 CAPLUS COPYRIGHT 2000 ACS

AN 1979:504628 CAPLUS

DN 91:104628

TI Gas chromatographic resolution of fatty acid esters of C27-C29 sterols with 5:6-olefinic structures based on the degree of unsaturation of acyl groups

AU Takagi, Toru; Sakai, Akira; Hayashi, Kenji; Itabashi, Yutaka

CS Fac. Fish., Hokkaido Univ., Hakodate, Japan

SO J. Chromatogr. Sci. (1979), 17(4), 212-14

CODEN: JCHSBZ; ISSN: 0021-9665

DT Journal

LA English

AB Gas chromatog. of common fatty acid esters of cholesterol, .beta.-sitosterol, stigmasterol, and campesterol was carried out on columns of Gas-Chrom Q coated with 3% Silar 10C, with a dual flame ionization detector. Chromosorb W AW DMCS coated with 2% OV-1 was also used. The esters having acyl groups of C12-22 chain lengths and 0-6 double bonds were characterized by equiv. chain lengths (ECL). Equations to calc. the ECL values of satd. and monoenoic esters of C27-29 sterols with 5:6-olefinic structures are presented. The effect of the column temp. on the ECL of the esters of unsatd. acids and the application to quant. analyses are discussed.

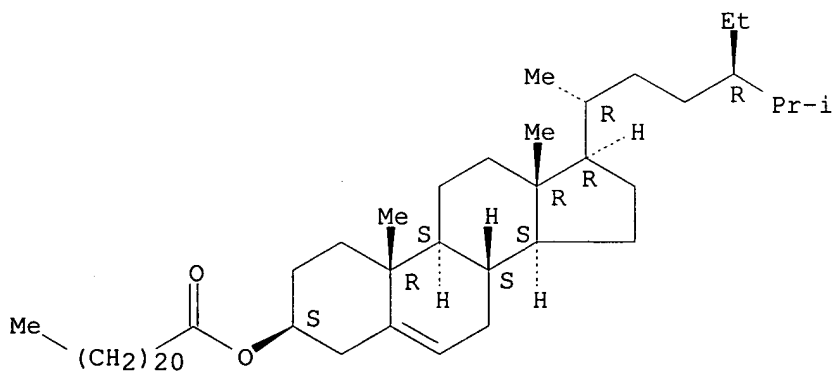
IT 22554-56-9

RL: ANT (Analyte); ANST (Analytical study)
(gas chromatog. of)

RN 22554-56-9 CAPLUS

CN Stigmast-5-en-3-ol, docosanoate, (3.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> D L44 BIB ABS HITSTR 31

L44 ANSWER 31 OF 31 CAPLUS COPYRIGHT 2000 ACS

AN 1969:93938 CAPLUS

DN 70:93938

TI Chemical study of *Prunus puddum* (stem bark) and *Prunus cornuta* (stem bark and wood)

AU Austin, P. W.; Seshadri, Tiruvenkata R.; Sood, M. S.

CS Univ. Delhi, Delhi, India

SO Indian J. Chem. (1969), 7(1), 43-8

CODEN: IJOCAP

DT Journal

LA English

AB The stem bark of *P. puddum* and the stem bark and wood of *P. cornuta* were examd. *P. puddum* contains .beta.-sitosterol behenate, tectochrysin, genistein, leucocyanidin, and the previously unknown 4'-glucoside of genkwanin. *P. cornuta* contains .beta.-sitosterol, .beta.-sitosterol glucoside, docosan-1,22-diol, tetracosan-1,24-diol, umbelliferone, and leuco-cyanidin. The bark of *P. puddum* also contains sakuranetin, prunetin, genkwanin, neosakuranin, and sakuranin. The petroleum ether

and

ether sol. fraction of the bark of *P. cornuta* on sapon. gave .beta.-sitosterol, a mixt. of docosan-1,22-diol and tetracosan-1,24-diol, and umbelliferone. The sapwood shavings of *P. cornuta* contained .beta.-sitosterol, naringenin, aromadendrin, kaempferol, and

cyanidin-HCl.

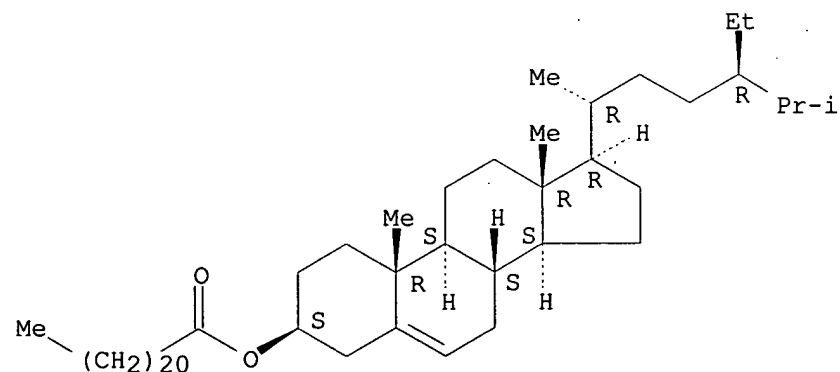
IT 22554-56-9

RL: BIOL (Biological study)
(in *Prunus cerasoides*)

RN 22554-56-9 CAPLUS

CN Stigmast-5-en-3-ol, docosanoate, (3.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> D BIB ABS HITSTR

L45 ANSWER 1 OF 22 CAPLUS COPYRIGHT 2000 ACS

AN 2000:34713 CAPLUS

DN 132:83678

TI Compositions for rapid and non-irritating transdermal delivery of pharmaceutically active agents and methods for formulating such compositions and delivery thereof

IN Kirby, Kenneth B.; Pettersson, Berno

PA Transdermal Technologies, Inc., USA

SO PCT Int. Appl., 92 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000001351	A1	20000113	WO 1999-US15297	19990707
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	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW:				
	GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				

PRAI US 1998-91910 19980707

AB Pharmaceutical compns. for the transdermal administration of a medicament or other active agent by topical application of the compn. to the skin of humans or other animals are described. Methodol. for formulating such compns. which provide for very rapid uptake of the medicament and transmigration into and through the skin to either fatty tissues or the vascular system, while minimizing irritation to the skin and/or immunol. response, is based on a transdermal delivery system (TDS) wherein the medicament is modified to form a true soln. in a complex formed from particular solvents and solvent and solute modifiers in combination with skin stabilizers. Uptake of the medicament is further facilitated and made more rapid by including forskolin or other source of cellular energy,

namely induction of cAMP or cGMP. Selection of specific solvents and solvent and solute modifiers and other functional ingredients and the amts. thereof are chosen such that there is a balance between the sum of the mole-moments [(molar amt. of each individual ingredient) X (dipole moment of that ingredient)] of the delivery system and the sum of the molar moments of the compn. in which the medicament is dissolved. Preferably, the van der Waals forces of the delivery system is also similarly matched to the van der Waals forces of the total compn.,

namely,

delivery system plus active agent. A cream for promoting cellulite removal contained conjugated linoleic acid 0.3, aescin 0.1, pyridoxal-5-phosphate 0.001, licorice (20 % glycyrrhizic acid) 0.05, ephedrine 0.5, theophylline 1.5, olive oil 2, carnitine 0.3, methylsulfonylmethane 2, ascorbyl palmitate 0.015, lemon oil 0.8, .alpha.-lipoic acid 0.2, lauricidin 2, androgen DHT 4.65, allantoin 0.3, vitamin E acetate 0.25, dexpanthenol 2, propylene glycol 2, and water

q.s.

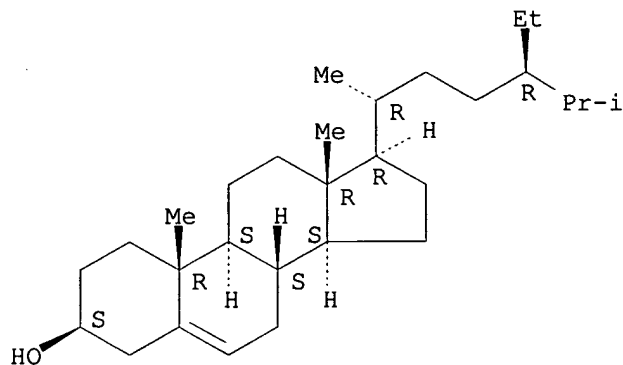
Searched by John Dantzman

308-4488

to 100 %.

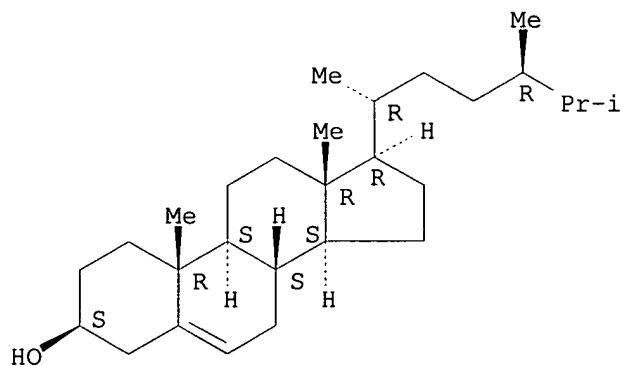
IT 83-46-5, .beta.-Sitosterol 474-62-4, Campesterol
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(topical compn. for rapid transdermal delivery contg. solvent and
solute modifiers and penetration enhancers)
RN 83-46-5 CAPLUS
CN Stigmast-5-en-3-ol, (3.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 474-62-4 CAPLUS
CN Ergost-5-en-3-ol, (3.beta.,24R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> D BIB ABS HITSTR 2

L45 ANSWER 2 OF 22 CAPLUS COPYRIGHT 2000 ACS

AN 1999:791882 CAPLUS

DN 132:76279

TI Lipids of abducted Antarctic pteropods, Spongiobranchaea australis, and their hyperiid amphipod host

AU Phleger, C. F.; Nelson, M. M.; Mooney, B.; Nichols, P. D.

CS Department of Biology, San Diego State University, San Diego, CA, 92182-4616, USA

SO Comp. Biochem. Physiol., Part B: Biochem. Mol. Biol. (1999), 124B(3), 295-307

CODEN: CBPBB8; ISSN: 0305-0491

PB Elsevier Science Inc.

DT Journal

LA English

AB The abducted juvenile pteropod Spongiobranchaea australis had less triacylglycerol (10.9% of total lipid) than free-living S. australis (34.7%), and they lack glyceryl ethers. Ratios of **eicosapentaenoic** acid [20:5(n-3)] to **docosahexaenoic** acid [22:6(n-3)] were also less (0.5) for abducted than free-living S. australis (1.4). The polyunsatd. fatty acid 14:3 was detected for the first time in both abducted and free S. australis. A no. of odd chain fatty acids were also detected, particularly 17:1 (up to 3.6% of total fatty acids) and also 15:0, 17:0, i17:0, and i19:0. The major sterols in the amphipod host, Hyperiella dilatata, included cholesterol (52-55% of total sterols) and trans-dehydrocholesterol (33-38%), whereas in S. australis (both free and abducted) the major sterols included trans-dehydrocholesterol (23-37%), brassicasterol (14-27%), and cholesterol (13-19%). The sterol profile of H. dilatata is consistent with a carnivorous diet, whereas that of S. australis is more representative of an herbivorous diet. This finding is consistent with the major prey of S. australis being the herbivore Clio pyramidata.

IT 19044-06-5, 24-Ethylcholesterol

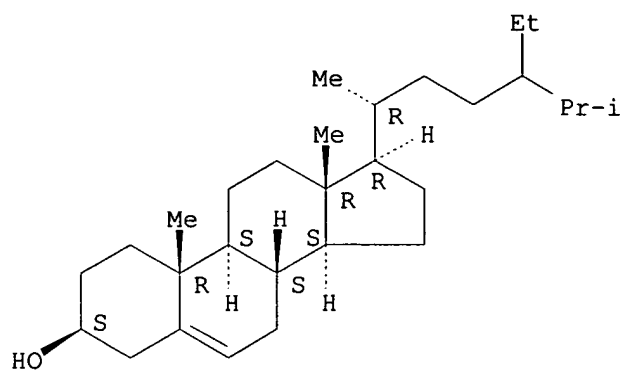
RL: BOC (Biological occurrence); BIOL (Biological study); OCCU (Occurrence)

(of abducted Antarctic pteropods and their hyperiid amphipod host)

RN 19044-06-5 CAPLUS

CN Stigmast-5-en-3-ol, (3.beta.,24.xi.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> D BIB ABS HITSTR 3

L45 ANSWER 3 OF 22 CAPLUS COPYRIGHT 2000 ACS

AN 1999:374785 CAPLUS

DN 131:62908

TI Diagenesis of planktonic fatty acids and sterols in Long Island Sound sediments: influences of a phytoplankton bloom and bottom water oxygen content

AU Sun, Ming-Yi; Wakeham, Stuart G.

CS Department of Marine Sciences, University of Georgia, Athens, GA, 30602, USA

SO J. Mar. Res. (1999), 57(2), 357-385

CODEN: JMMRAO; ISSN: 0022-2402

PB Sears Foundation for Marine Research

DT Journal

LA English

AB Diagenesis of org. matter in coastal sediments from Long Island Sound (LIS) was investigated by measuring fatty acids and sterols in a time-series of surface sediment samples over a spring phytoplankton bloom;

and sediment cores collected during and after a bloom at 2 sites with distinctively different bottom-water O₂ content. Time-dependent distributions of sedimentary fatty acids and sterols in LIS were strongly affected by pulsed inputs from the overlying water column, variations in benthic community, and redox-related degradn. processes. The phytoplankton

bloom delivered an intense pulse of unsatd. fatty acids (e.g., 16:1(:omega.7) and 20:5) to surface sediment. Continuous increases of cholesterol and di-unsatd. sterols after the bloom were related to zooplankton grazing processes and increased benthic faunal abundance. High inventories of planktonic fatty acids and sterols in the upper 5 cm of sediment were obsd. at the low O₂ site in summer, probably caused by a combination of higher input, reduced degradn. rates, and lower macrofaunal activity under anoxic vs. oxic conditions.

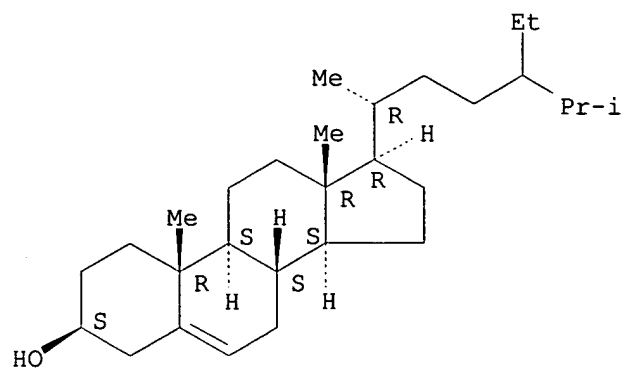
IT 19044-06-5, 24-Ethylcholest-5-en-3.beta.-ol 23929-42-2,
24-Methylcholest-5-en-3.beta.-ol

RL: OCU (Occurrence, unclassified); OCCU (Occurrence)
(phytoplankton bloom, redox conditions, and bottom water and sediment oxygen concn. effect on diagenesis of planktonic fatty acids and sterols in sediment, Long Island Sound)

RN 19044-06-5 CAPLUS

CN Stigmast-5-en-3-ol, (3.beta.,24.xi.)- (9CI) (CA INDEX NAME)

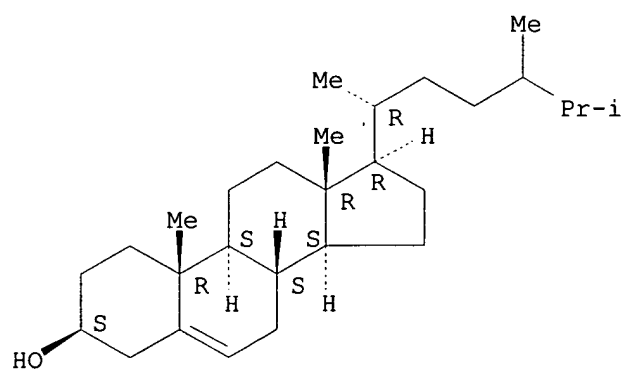
Absolute stereochemistry.



RN 23929-42-2 CAPLUS

CN Ergost-5-en-3-ol, (3.β.,24.ξ.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> D BIB ABS HITSTR 4

L45 ANSWER 4 OF 22 CAPLUS COPYRIGHT 2000 ACS

AN 1998:727979 CAPLUS

DN 130:63818

TI Liver lipids and fatty acids of the sting ray *Dasyatis bleekeri* (Blyth)

AU Pal, Debasish; Banerjee, Dipankar; Patra, Tarun K.; Patra, Amarendra;
Ghosh, Amitabha

CS Department of Chemistry, Bose Institute, Calcutta, 700009, India

SO J. Am. Oil Chem. Soc. (1998), 75(10), 1373-1378

CODEN: JAOCA7; ISSN: 0003-021X

PB AOCs Press

DT Journal

LA English

AB The sting ray, *Dasyatis bleekeri* (Blyth), has been studied for lipids and fatty acids of its liver. The neutral lipids identified were hydrocarbons, wax esters, steryl esters, 1-O-alkyl-2,3-diacylglycerols, triacylglycerols, and sterols. Neutral lipids were predominant (91.8%), major components being triacylglycerols (92.7%). Polyenoic fatty acids

of

n-3 series, viz. **eicosapentaenoic** acid and **docosahexaenoic** acid, were high in the phospholipid and neutral lipid fractions. Cholesterol was the major component (67.9%) in the steryl ester fraction. Glyceryl ethers, with chain lengths up to 30 carbons, were recorded with unsatd., anteiso, iso, and normal chains. In wax ester alcs., up to 32-carbon chains were recorded. Hydrocarbons were up to 36-carbon chains with anteiso, iso, and normal chains. Among branched chain hydrocarbons, pristane was the major component (6.7%) and squalene was present at the level of 3.5%. Chimyl and batyl alc. backbones were the major components found in 1-O-alkyl-diacylglycerols.

IT 83-46-5 474-62-4, Campesterol

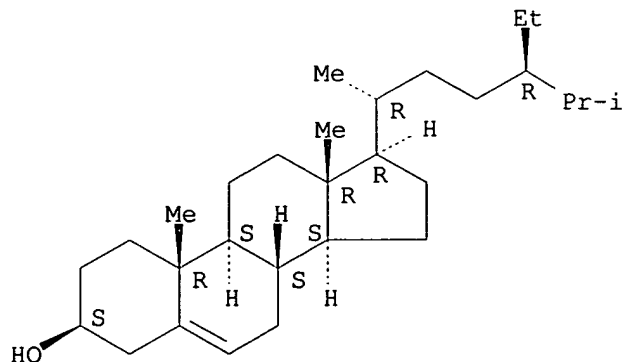
RL: BOC (Biological occurrence); BIOL (Biological study); OCCU (Occurrence)

(Liver lipids and fatty acids of the sting ray *Dasyatis bleekeri* (Blyth))

RN 83-46-5 CAPLUS

CN Stigmast-5-en-3-ol, (3.beta.)- (9CI) (CA INDEX NAME)

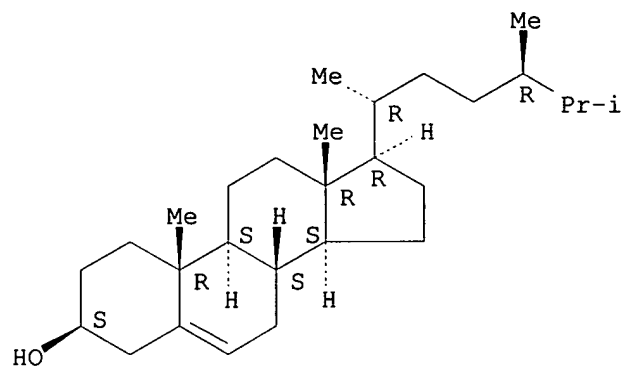
Absolute stereochemistry.



RN 474-62-4 CAPLUS

CN Ergost-5-en-3-ol, (3.β.,24R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> D BIB ABS HITSTR 5

L45 ANSWER 5 OF 22 CAPLUS COPYRIGHT 2000 ACS

AN 1998:594228 CAPLUS

DN 129:300186

TI Lipids and trophodynamics of Antarctic zooplankton

AU Phleger, Charles F.; Nichols, Peter D.; Virtue, Patti

CS Department of Biology, San Diego State University, San Diego, CA, CA 92182, USA

SO Comp. Biochem. Physiol., Part B: Biochem. Mol. Biol. (1998), 120B(2), 311-323

CODEN: CBPBB8; ISSN: 0305-0491

PB Elsevier Science Inc.

DT Journal

LA English

AB Zooplankton were collected by trawl from the Elephant Island region of the

Antarctic Peninsula and from East Antarctica near 63-65.degree.S and 139-150.degree.W. Most zooplankton had low percentages of wax esters (0-8%, as percent of total lipid). High triacylglycerol levels were found

in the hyperiid amphipod *Themisto gaudichaudii* (68%, as percent of total lipid), the krill (Euphausiacea) *Euphausia triacantha* (44-54% triacylglycerol) and *Euphausia frigida* (27% triacylglycerol) and the scyphomedusan *Periphylla periphylla* (42-48% triacylglycerol).

Polyunsatd.

fatty acids (PUFA) comprised 23-60% of the total fatty acids, with the omega-3 fatty acids **eicosapentaenoic** acid [20:5(n-3)] and **docosahexaenoic** acid [22:6(n-3)] being most abundant. P. *periphylla* was an exception with 12-19% docosapentaenoic acid [22:5(n-3)] being the major PUFA. The major euphausiid sterols included cholesterol (75-92%, as percent of total sterols) and desmosterol (6-22%). The major sterols of other zooplankton were more diverse and included trans-dehydrocholesterol, 24-methylencholesterol, brassicasterol and 24-nordehydrocholesterol. The benthic ascidian, *Distaplia cylindrica*,

had 45% stanols, as percent of total sterols, whereas the pelagic ascidian *Salpa thompsoni* had only 8-11% stanols. Lipid, fatty acid and sterol

data are used to examine trophodynamic interactions and provide an ability to distinguish herbivorous and carnivorous diets and det. survival and reproductive strategies.

IT 19044-06-5, 24-Ethylcholesterol

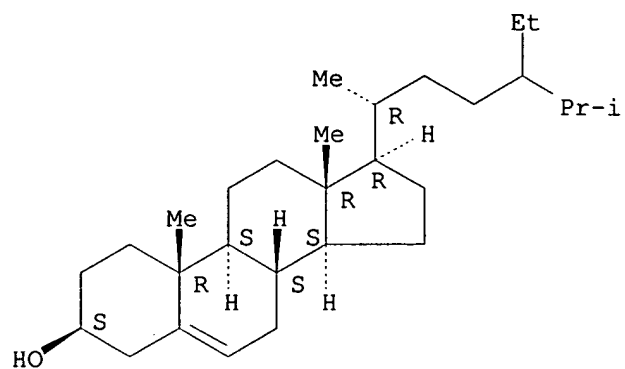
RL: BOC (Biological occurrence); BIOL (Biological study); OCCU (Occurrence)

(lipids and trophodynamics of Antarctic zooplankton)

RN 19044-06-5 CAPLUS

CN Stigmast-5-en-3-ol, (3.beta.,24.xi.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> D BIB ABS HITSTR 6

L45 ANSWER 6 OF 22 CAPLUS COPYRIGHT 2000 ACS

AN 1998:501727 CAPLUS

DN 129:165897

TI The use of lipid metabolic profiling to assess the biological impact of marine sewage pollution

AU Avery, E. L.; Dunstan, R. H.; Nell, J. A.

CS Department of Biological Sciences, The University of Newcastle, New South Wales, 2308, Australia

SO Arch. Environ. Contam. Toxicol. (1998), 35(2), 229-235

CODEN: AECTCV; ISSN: 0090-4341

PB Springer-Verlag New York Inc.

DT Journal

LA English

AB Sydney rock oysters, *Saccostrea commercialis*, were deployed for a 3-mo period at sewage-disturbed and control marine locations in the Hunter Region, New South Wales, Australia. After this period, the oysters were retrieved and the gills dissected and extd. to analyze the sapond. lipid components (including fatty acids and sterols) by gas chromatog.-mass spectrometry (GC-MS). Multivariate anal. (discriminant function) of the GC-MS lipid profiles indicated that the lipid homeostasis in oysters from the sewage locations was significantly different vs. that obsd. in oysters

from control locations ($p < 0.0001$). The primary factor discriminating between sewage and control locations was the concn. of .beta.-sitosterol, a plant sterol derived from domestic sewage and marine algae. Results indicated that gill lipid metab. differentially alters in response to deployment of oysters in either sewage-polluted or control locations. This anal. method provides a sensitive measure for the biol. impact of composite waste cocktails on strategically located marker organisms in affected environments.

IT 83-46-5, .beta.-Sitosterol 474-62-4, Campesterol

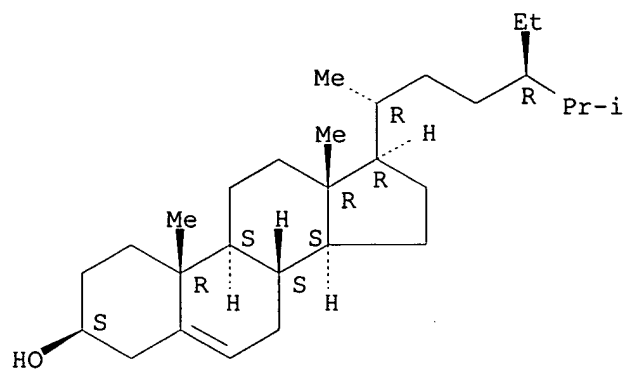
RL: BOC (Biological occurrence); BIOL (Biological study); OCCU (Occurrence)

(using oyster lipid metabolic profiling to assess biol. impact of wastewater discharge pollution of seawater at Newcastle, Australia)

RN 83-46-5 CAPLUS

CN Stigmast-5-en-3-ol, (3.beta.)- (9CI) (CA INDEX NAME)

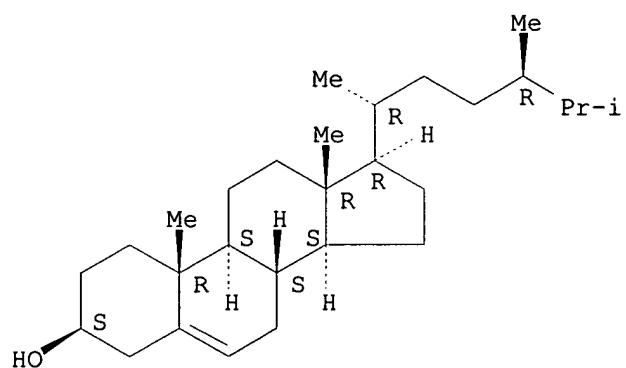
Absolute stereochemistry.



RN 474-62-4 CAPLUS

CN Ergost-5-en-3-ol, (3.β.,24R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> D BIB ABS HITSTR 7

L45 ANSWER 7 OF 22 CAPLUS COPYRIGHT 2000 ACS

AN 1998:268327 CAPLUS

DN 128:326335

TI Hypoallergenic compositions and compositions for treatment of sensitive skin

IN Castelli, Dominique; Ries, Gerd; Friteau, Laurence; Bousigniere, Elisabeth; Fredon, Laurent

PA ROC, Fr.; Castelli, Dominique; Ries, Gerd; Friteau, Laurence; Bousigniere,

Elisabeth; Fredon, Laurent

SO PCT Int. Appl., 38 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9817246	A1	19980430	WO 1997-IB1318	19971021
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	RW:				
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	FR 2754713	A1	19980424	FR 1996-12821	19961022
	FR 2754713	B1	19990108		
	AU 9744703	A1	19980515	AU 1997-44703	19971021
	BR 9712648	A	19991026	BR 1997-12648	19971021
	EP 955995	A1	19991117	EP 1997-943120	19971021

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI

PRAI FR 1996-12821 19961022

WO 1997-IB1318 19971021

AB A synergistic combination of .gtoreq.2 of (a) an anti-radical agent, (b) an anti-inflammatory agent, and (c) an anti-allergy agent is used for prepn. of a compn. for treatment of sensitive skin and/or skin allergy. The anti-radical agent is a radical scavenger, inhibitor of lipid peroxidn., or stimulant of endogenous prodn. of radical-degrading enzymes.

The anti-inflammatory agent is a prostaglandin antagonist (cyclooxygenase inhibitor) or an inhibitor of prodn. of cytokines, leukotrienes, or reactive nitro compds. The anti-allergy agent is an inhibitor of lymphocyte proliferation, of histocompatibility antigen receptor internalization, or of cytokine prodn. The combination inhibits the synthesis and/or expression of neuromediators such as neurokinins A and

B, vasoactive intestinal polypeptide, neuropeptide Y, neurotensin, and NGF. Thus, dried Ginkgo biloba leaves were extd. to remove chlorophyll, lipids,

waxes, lectins, etc. A combination of the Ginkgo extn. residue (5 mg/mL) and carboxymethyl-.beta.-glucan (5 mg/mL) synergistically inhibited NO2-

Searched by John Dantzman 308-4488

formation, TNF formation, and CD23 expression in cultured human keratinocytes after stimulation with a combination of IFN-.gamma. and Escherichia coli lipopolysaccharide. Similar results were obtained after stimulation of the cells with IL-4 and IgE-contg. immune complexes. A suitable compn. contained tretinoin 0.05, .beta.-glucan 0.50, G. biloba ext. 0.10, light liq. paraffin 25.00, 70% sorbitol soln. 5.00, hydroxyoctacosanyl hydroxystearate 5.00, methoxy-Macrogol 22/dodecyl glycol copolymer 5.00, Macrogol 45/dodecyl glycol copolymer 3.00, stearoxytrimethylsilane + stearyl alc. 1.00, dimethicone 1.00, fragrance 0.25, Me p-hydroxybenzoate 0.20, Na edetate 0.10, Quaternium 15 0.10, BHT 0.10, citric acid monohydrate 0.10, and H2O 53.495 g.

IT 83-46-5, .beta.-Sitosterol

RL: BAC (Biological activity or effector, except adverse); THU

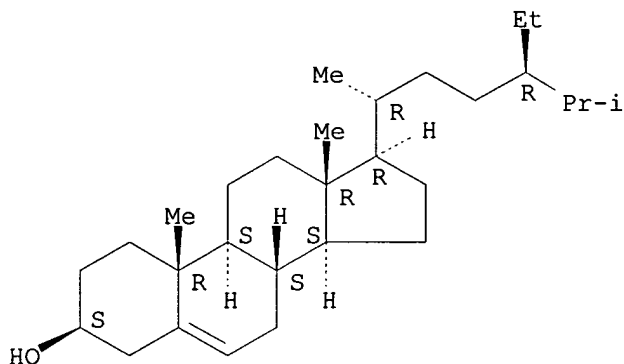
(Therapeutic use); BIOL (Biological study); USES (Uses)

(hypoallergenic compns. and compns. for treatment of sensitive skin)

RN 83-46-5 CAPLUS

CN Stigmast-5-en-3-ol, (3.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> D BIB ABS HITSTR 9

L45 ANSWER 9 OF 22 CAPLUS COPYRIGHT 2000 ACS

AN 1996:267635 CAPLUS

DN 124:312609

TI Content of polyunsaturated fatty acids and cholesterol in muscle tissue of

tench (*Tinca tinca*), common carp (*Cyprinus carpio*) and hybrid of bighead carp (*Aristichthys nobilis*) with silver carp (*Hypophthalmichthys molitrix*)

AU Vacha, Frantisek; Tvrzicka, Eva

CS Research Institute of Fish Culture and Hydrobiology, Vodnany, Czech Rep.

SO Pol. Arch. Hydrobiol. (1995), 42(1-2), 151-7

CODEN: PAHYA2; ISSN: 0032-3764

DT Journal

LA English

AB A global and comprehensive view on the content and compn. of polyunsatd. fatty acids (PUFA) and cholesterol in tench (*T. tinca*) is presented.

These are compared with evaluations for common carp (*C. carpio*) and hybrid

of bighead carp (*A. nobilis*) with silver carp (*H. molitrix*) from the same living conditions. Samples were taken from fish muscle tissue to represent edible parts of freshwater fish and were analyzed by gas chromatog. The content of **eicosapentaenoic** acid (EPA) was highest in tench - 4.71 g in 100 g of total lipids. Total omega3 fatty acids group were also highest (24.35 g in 100 g of total lipids) in tench but very similar (19.98 g in 100 g of total lipids) to hybrid of bighead carp with silver carp. The highest content of total cholesterol in

muscle

tissue was in hybrid of bighead carp with silver carp (245.68 mg) which corresponds well with the content of total lipids in muscle tissue (13.23 g in the hybrid). The amt. of total lipids in tench muscle tissue was at the lowest level (2.73 g in 100 g of muscle tissue) in the 3 fish

species.

IT 83-46-5, .beta.-Sitosterol

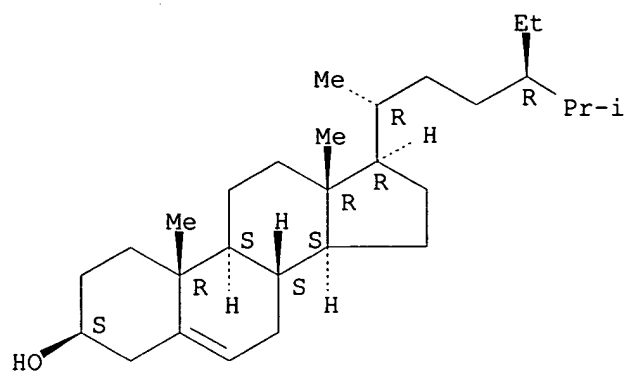
RL: BOC (Biological occurrence); BIOL (Biological study); OCCU (Occurrence)

(fatty acids and cholesterol in muscle of tench and common carp and carp hybrid)

RN 83-46-5 CAPLUS

CN Stigmast-5-en-3-ol, (3.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> D BIB ABS HITSTR 10

L45 ANSWER 10 OF 22 CAPLUS COPYRIGHT 2000 ACS

AN 1995:278788 CAPLUS

DN 122:77118

TI The lipids of slugs and snails: evolution, diet and biosynthesis

AU Zhu, Ning; Dai, Xiaonan; Lin, Don S.; Connor, William E.

CS Dep. Med., Oregon Health Sciences Univ., Portland, OR, 97201, USA

SO Lipids (1994), 29(12), 869-75

CODEN: LPDSAP; ISSN: 0024-4201

DT Journal

LA English

AB The authors have analyzed the sterol and fatty acid compns. of 3 species of slugs and 3 species of snails. The sterols of slugs included 8 different sterols: cholesterol contributed 76-85% of the total sterols, brassicasterol accounted for 4-13%; other sterols identified were lathosterol, 24-methylene cholesterol, campesterol, stigmasterol, sitosterol, and sitostanol. In contrast, snails contained 2 addnl. sterols, desmosterol and cholestanol. Of the polyunsatd. fatty acids in slugs, linoleic (18:2n-6) and arachidonic acids (20:4n-6) were the major n-6 fatty acids, while linolenic (18:3n-3) and **eicosapentaenoic** acids (20:5n-3) were the predominant n-3 fatty acids. **Docosahexaenoic** acid (22:6n-3), the end product in the n-3 fatty acid synthetic pathway and an important membrane fatty acid of mammals, fish, and birds, was absent in both slugs and snails. However, the analogous product of n-6 fatty acid synthesis, 22:5n-6, was found in both snails and slugs. This raises speculation about preference for n-6 fatty acid synthesis in these species. The data show the unique sterol and fatty acid compns. of slugs and snails, as well as similarities and differences in sterol compn. between the 2. The results between the 2 land mollusks are contrasted with those of marine mollusks, such as oysters, clams, and scallops.

IT 83-46-5 474-62-4, Campesterol

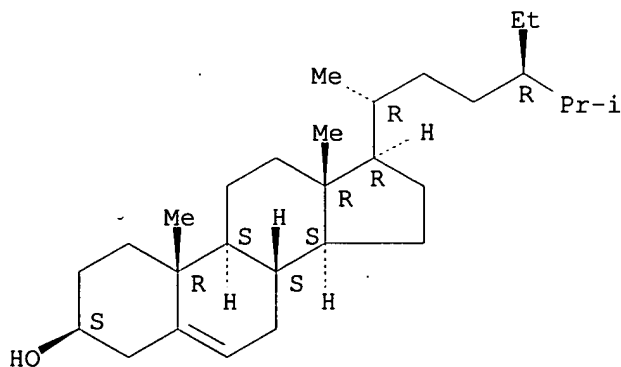
RL: BOC (Biological occurrence); BIOL (Biological study); OCCU (Occurrence)

(fatty acids and sterols of slugs and snails)

RN 83-46-5 CAPLUS

CN Stigmast-5-en-3-ol, (3.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



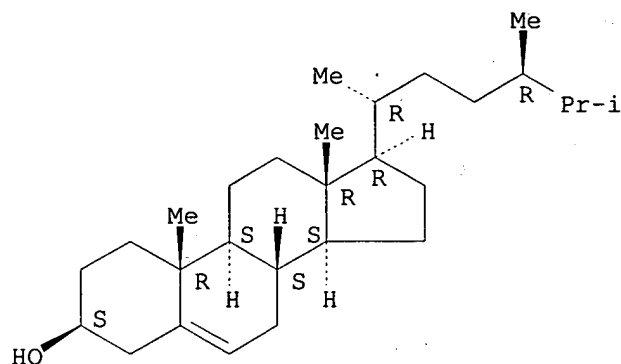
Searched by John Dantzman

308-4488

RN 474-62-4 CAPLUS

CN Ergost-5-en-3-ol, (3.beta.,24R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> D BIB ABS HITSTR 11

L45 ANSWER 11 OF 22 CAPLUS COPYRIGHT 2000 ACS

AN 1994:676319 CAPLUS

DN 121:276319

TI Fatty acid and sterol composition on Nannochloris sp.

AU Petkov, Georgi D.; Furnadzieva, Sevdalina T.; Andreeva, Raina D.

CS Institute Plant Physiology, Bulgarian Academy Sciences, Sofia, Bulg.

SO Arch. Hydrobiol., Suppl. (1994), 102, 133-5

CODEN: AHBSA8; ISSN: 0365-284X

DT Journal

LA English

AB The arachidonic acid content (7% of total acids) was established for the 1st time and the **eicosapentaenoic** acid content was confirmed to be of a significantly greater amt. (23%) than previously reported in lipids of the green marine unicellular alga Nannochloris sp. Cholesterol and sitosterol are the main sterols. Fatty acid and sterol comps. do

not

change when nitrate or urea is used as the nitrogen source. Thus, Nannochloris is suitable for use in the artificial nutrition chain phytoplankton-zooplankton-fish.

IT 83-46-5

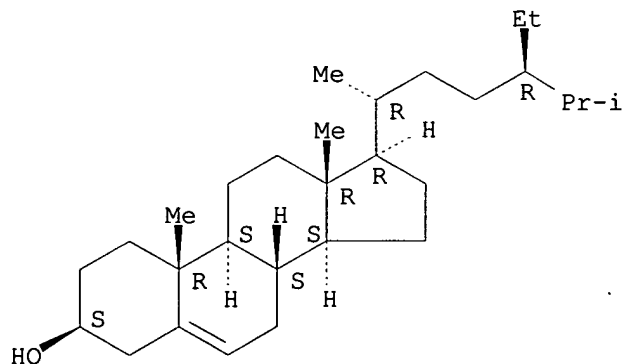
RL: BOC (Biological occurrence); BIOL (Biological study); OCCU (Occurrence)

(fatty acid and sterol compn. on Nannochloris sp.)

RN 83-46-5 CAPLUS

CN Stigmast-5-en-3-ol, (3.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> D BIB ABS HITSTR 12

L45 ANSWER 12 OF 22 CAPLUS COPYRIGHT 2000 ACS

AN 1994:626000 CAPLUS

DN 121:226000

TI Sterols of eustigmatophytes

AU Patterson, G. W.; Tsitsa-Tzardis, E.; Wikfors, G. H.; Ghosh, P.; Smith, B.

C.; Gladu, P. K.

CS Dep. Botany, Univ. Maryland, College Park, MD, 20742, USA

SO Lipids (1994), 29(9), 661-4

CODEN: LPDSAP; ISSN: 0024-4201

DT Journal

LA English

AB The oyster cannot synthesize sterols from smaller mols. but must obtain them from its diet, which consists of detritus and small organisms, i.e., mostly single-celled algae. Algae differ widely in their effectiveness

as

oyster food. Small (<5 .mu.m) algae which have an abundance of sterols and polyunsatd. fatty acids appear to be the most effective. Recent studies have shown the occurrence of cholesterol in strains of the unicellular algae Tetraselmis, Chaetoceros and Skeletonema, sometimes in large quantities. In the study reported here, six isolates of a recently constructed algal class, the Eustigmatophyceae, have been examd. for sterols and fatty acids by gas chromatog. and gas chromatog./mass spectrometry. All strains were shown to contain cholesterol as the principal sterol. Two isolates contained large amts. of total sterol (400-1000 fg/cell), and one (Sticho 0-18) also contained large amts. of **eicosapentaenoic** acid (20:5n-3). These biochem. characteristics are desirable in a potential food source for oysters.

IT 19044-06-5, 24-Ethylcholesterol

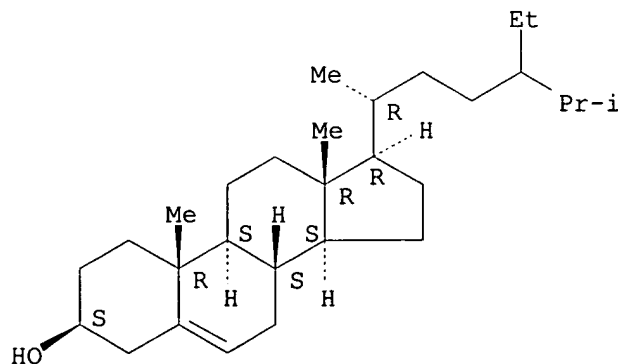
RL: BOC (Biological occurrence); BIOL (Biological study); OCCU (Occurrence)

(sterols and major fatty acids of eustigmatophytes)

RN 19044-06-5 CAPLUS

CN Stigmast-5-en-3-ol, (3.beta.,24.xi.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> D BIB ABS HITSTR 13

L45 ANSWER 13 OF 22 CAPLUS COPYRIGHT 2000 ACS

AN 1994:454240 CAPLUS

DN 121:54240

TI Sterol and fatty acid composition of neutral lipids of *Paratenuisentis ambiguus* and its host eel

AU Weber, Nikolaus; Vosmann, Klaus; Aitzetmueller, Kurt; Filipponi, Christin;

Taraschewski, Horst

CS Institut für Biochemie und Technologie der Fette, BAGKF, Muenster, 48147, Germany

SO Lipids (1994), 29(6), 421-7

CODEN: LPDSAP; ISSN: 0024-4201

DT Journal

LA English

AB The sterol compn. of free sterol and steryl ester fractions of the fish parasite *Parateunisentis ambiguus* was detd. In addn., the fatty acid compn. of various neutral lipid classes, i.e., wax esters, steryl esters, triacylglycerols and free fatty acids, as well as the compn. of the 1-O-alkyl moieties of total ether glycerolipids of the parasite, were investigated. The results of these studies were compared with those obtained on the intestinal tract tissue of its host, the eel (*Anguilla anguilla*). Cholesterol is the major sterol in both *P. ambiguus* and *A. anguilla*. However, the sterols of *P. ambiguus* contain high proportions (>20%) of other sterols, such as campesterol and various dehydrosterols. [e.g., 7-dehydrocholesterol and cholesta-5,22(E)-dienol]. The presence

of

these minor sterols agrees with the known biotransformations of exogenous sterols in various helminths. Considerable differences are found in the fatty acid compn. of neutral lipid fractions, as well as the total lipid ext. from the endoparasite as compared to the host tissue. In

particular,

eicosapentaenoic acid (20:5n-3), other polyunsatd. fatty acids, such as 20:4n-6, 22:5n-3 and 22:6n-3, as well as long-chain satd. fatty acids, such as 20:0, are generally enriched in the neutral lipid

fractions

of the parasite as compared to those of infected eel intestine. The

anal.

of ether glycerolipids revealed that 1-O-hexadecyl (16:0) and 1-O-hexadecenyl (16:1) moieties were present in similar proportions in

the

ether lipids of both *P. ambiguus* and eel intestine, whereas 1-O-octadecyl (18:0) moieties are more prominent in the parasite and 1-O-octadecenyl (18:1) moieties in the eel. The results of these studies show that *P. ambiguus* has specific mechanisms for the regulation of the sterol and fatty acid compn. of its neutral lipids.

IT 474-62-4, Campesterol

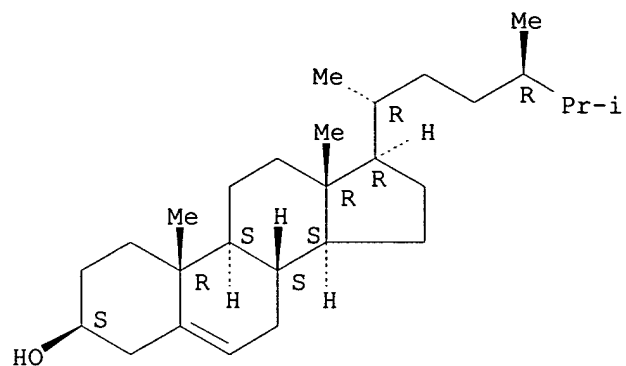
RL: BIOL (Biological study)

(in fish parasite and intestine of host eel)

RN 474-62-4 CAPLUS

CN Ergost-5-en-3-ol, (3.beta.,24R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> D BIB ABS HITSTR 14

L45 ANSWER 14 OF 22 CAPLUS COPYRIGHT 2000 ACS

AN 1994:95388 CAPLUS

DN 120:95388

TI High dosage vitamin E effect on oxidative status and serum lipids distribution in streptozotocin-induced diabetic rats

AU Douillet, Christielle; Chancerelle, Yves; Cruz, C.; Maroncles, C.; Kergonou, Jean F.; Renaud, Serge; Ciavatti, Mayvonne

CS Natl. Inst. Health Med. Res., Lyon-Bron, 69675, Fr.

SO Biochem. Med. Metab. Biol. (1993), 50(3), 265-76

CODEN: BMMBES; ISSN: 0885-4505

DT Journal

LA English

AB This study was performed to det. whether vitamin E supplementation in streptozotocin-induced diabetic rats treated by insulin could reduce serum

oxidn. markers (malondialdehyde:MDA, Schiff bases, anti-protein-MDA adduct

antibodies) and modulate lipid changes. After 10 wk, diabetes induced in rats a significant increase in Schiff bases and anti-protein-MDA adduct antibodies. These alterations were accompanied by a significant rise in serum free fatty acids (225%), triglycerides (35%), and phospholipids (30%) and changes in fatty acid distribution in these fractions and in cholesterol esters. Vitamin E supplementation in diabetic rats reduced Schiff bases and anti-protein-MDA adduct antibodies and tended to restore the fatty acids profile close to control rats without decreasing quant. serum lipids enhanced by diabetes. Concerning fatty acids, vitamin E chiefly reduced stearic acid (C18:0) in free fatty acids, cholesterol esters, and phospholipids and cancelled the decrease in low mol. triglycerides obsd. in diabetic rats. Furthermore, vitamin E maintained the ratio of monounsaturd. and polyunsaturd. fatty acids, particularly with respect to oleic acid (C18:1), dihomo- γ -linolenic acid (C20:3 n-6), **eicosapentaenoic** (C20:5 n-3), and docosapentaenoic acid (C22:5 n-3), in serum phospholipids. These changes obsd. in vitamin E supplemented rats, compared to vitamin E-untreated diabetic rats, could favor prevention of accelerated atherogenesis. Particularly, the

decrease

of serum peroxides and enhancement in phospholipid fatty acids (C20:3 n-6,

C20:5 n-3, and C22:5 n-3) could induce the preferential formation of prostaglandins (PGE1, PGI2, PGI3) which are protective in cardiovascular diseases.

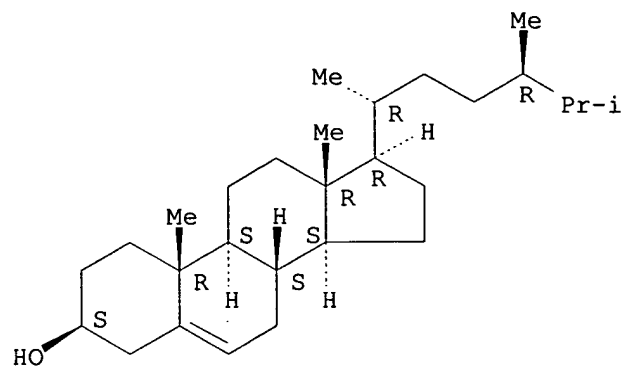
IT 474-62-4, Campesterol

RL: BPR (Biological process); BIOL (Biological study); PROC (Process) (metab. of, vitamin E effect on, in diabetes)

RN 474-62-4 CAPLUS

CN Ergost-5-en-3-ol, (3.beta.,24R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> D BIB ABS HITSTR 15

L45 ANSWER 15 OF 22 CAPLUS COPYRIGHT 2000 ACS

AN 1994:76289 CAPLUS

DN 120:76289

TI Changes in the digestive gland of *Euphausia superba* during short-term starvation: lipid class, fatty acid and sterol content and composition

AU Virtue, P.; Nicol, S.; Nichols, P. D.

CS Univ. Tasmania, Tasmania, 7001, Australia

SO Mar. Biol. (Berlin) (1993), 117(3), 441-8

CODEN: MBIOAJ; ISSN: 0025-3162

DT Journal

LA English

AB During short-term (19 days) starvation, total lipid in the digestive gland

of *E. superba* decreased from 21 to 9% dry wt. Total lipid per digestive gland decreased significantly during starvation compared to day 0

individuals, falling from 1960 to 385 .mu.g. Polar lipid was the major lipid class utilized during starvation, falling from 1510 to 177 .mu.g

per

300

digestive gland (76 to 45%). Abs. levels of triacylglycerol fell from

to 76 .mu.g; however, relative levels remained unchanged. The relative level of free fatty acid increased significantly with starvation (4 to 39%) with abs. levels ranging from 79 to 156 .mu.g per digestive gland. Abs. levels of all fatty acids per digestive gland declined continually until the end of the starvation period. The long-chain polyunsatd. acids **eicosapentaenoic** (20:5.omega.3) and **docosahexaenoic** (22:6.omega.3), decreased with starvation from 37 to 26% and 15 to 10%, resp. whereas the satd. fatty acid, palmitic acid (16:0), increased from 15 to 22%. Cholesterol, the major sterol in this organ, increased from

17

to 44 .mu.g per digestive gland by day 3, and by day 19 had returned to levels found in the digestive gland of day 0 individuals. Desmosterol followed a similar pattern to cholesterol, increasing from 3 .mu.g per digestive gland on day 0 to 11 .mu.g on day 3, and falling to 2 .mu.g on day 19. Other sterols in the digestive gland, predominantly of algal origin, fell from the levels found in day 0 individuals to near zero

amts.

by day 6. The digestive gland of *E. superba* plays a dynamic role during short-term starvation in terms of lipid content and compn. The relative levels of polar lipids, free fatty acids, and cholesterol in the

digestive

gland may provide reliable indexes of the nutritional condition of *E. superba* in the field. Sterols in the digestive gland are indicative of recent dietary compn. of krill, and may also be used to quantify dietary input from individual phytoplanktonic species.

IT 83-46-5 474-62-4, Campesterol

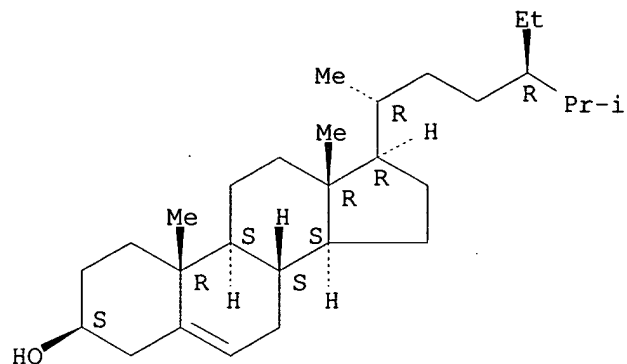
RL: BIOL (Biological study)

(of digestive gland, of krill in starvation)

RN 83-46-5 CAPLUS

CN Stigmast-5-en-3-ol, (3.beta.)- (9CI) (CA INDEX NAME)

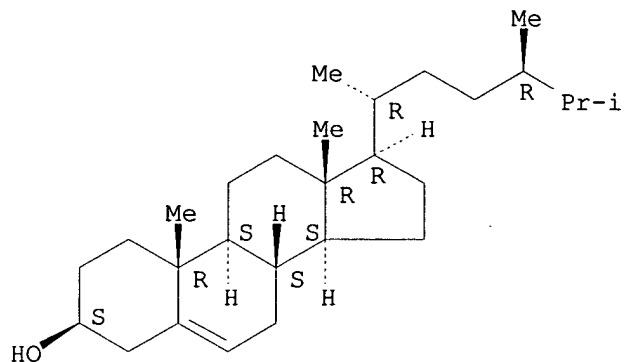
Absolute stereochemistry.



RN 474-62-4 CAPLUS

CN Ergost-5-en-3-ol, (3.beta.,24R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> D BIB ABS HITSTR 16

L45 ANSWER 16 OF 22 CAPLUS COPYRIGHT 2000 ACS

AN 1992:261977 CAPLUS

DN 116:261977

TI Characterization of organic matter at the air-sea interface, in subsurface

water, and in bottom sediments near the Balabar sewage outfall in Sydney's

coastal region

AU Nichols, P. D.; Espey, Q. I.

CS Mar. Lab., CSIRO, Hobart, 7001, Australia

SO Aust. J. Mar. Freshwater Res. (1991), 42(4), 327-48

CODEN: AJMFA4; ISSN: 0067-1940

DT Journal

LA English

AB The lipid and related-chem. compns. of samples from the air-sea interface,

subsurface water, and sediments collected adjacent to Sydney's Malabar nearshore sewage outfall during January and Feb. 1990 were analyzed in detail. A novel sampling scheme made use of a rotating-drum microlayer sampler, a towed Seastar sampler for filtration and extn. of subsurface water in situ, and sediment collection in Teflon bags by divers.

Particulate and dissolved org. matter was examd. for 4 distinct aquatic environments: the surface microlayer in a no-slick zone (ML), the microlayer in a plume slick (PS), the microlayer in a banded slick (BS), and subsurface waters (SS). The concns. of lipid classes and of many individual components in particulate matter from water samples generally followed the trend PS > ML > BS > SS, although in several instances the sequence began with ML > PS. A similar pattern was seen for the

dissolved

org. fractions. The compn. of the ML sample differed from the compns. of the other water samples for several of the lipid classes analyzed; the very high relative abundance of cholesterol and the presence of significant portions of long-chain satd. and monounsaturd. fatty acids indicate a substantial marine origin for the lipids in the ML sample.

The

concns. of most components were generally an order of magnitude higher in sediment 0.5 km from the Malabar outfall than in sediment 0.85 km away (long Bay). The fecal indicator coprostanol was present in all samples

at

concns. of 0.1-7 $\mu\text{g/L}$ in water and 0.1-1.1 $\mu\text{g/g}$ in sediments. Petroleum contamination was also apparent in all samples, based on a no. of distinct features of the hydrocarbon profiles: the occurrence of a

high

abundance of unresolved complex material, little or no odd-over-even predominance in the distribution of n-alkanes, and the presence of

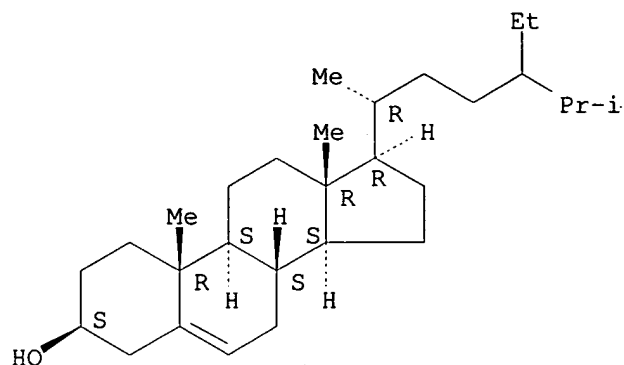
hopanes

and steranes characteristic of crude oil. Polycyclic arom. hydrocarbons (PAHs) derived from combustion sources were detected in sediments at both distances from the outfall. PAH concns. in water samples were at the limits of detection. With the commissioning of deep-water outfalls to replace the nearshore ones, a decrease in nearshore contamination is expected. This study provides baseline chem. data for future comparative examn. of the efficacy of Sydney's deep-water sewage outfalls.

Searched by John Dantzman 308-4488

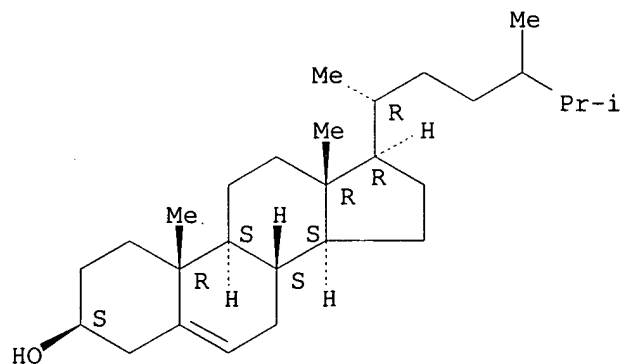
IT 19044-06-5 23929-42-2, 24-Methylcholest-5-en-3.β.-ol
RL: POL (Pollutant); OCCU (Occurrence)
(seawater and marine sediment pollution by, from sewage outfall, near
Sydney, New South Wales)
RN 19044-06-5 CAPLUS
CN Stigmast-5-en-3-ol, (3.β.,24.ξ.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 23929-42-2 CAPLUS
CN Ergost-5-en-3-ol, (3.β.,24.ξ.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> D BIB ABS HITSTR 17

L45 ANSWER 17 OF 22 CAPLUS COPYRIGHT 2000 ACS

AN 1992:148560 CAPLUS

DN 116:148560

TI Lipids of the earthworm *Lumbricus terrestris*

AU Albro, Phillip W.; Schroeder, Joanna L.; Corbett, Jean T.

CS Lab. Mol. Biophys., Natl. Inst. Environ. Health Sci., Research Triangle Park, NC, 27709, USA

SO Lipids (1992), 27(2), 136-43

CODEN: LPDSAP; ISSN: 0024-4201

DT Journal

LA English

AB The lipid compn. of the earthworm *L. terrestris* has been reexamd. under conditions intended to avoid enzymic and chem. alterations during storage,

extn., and fractionation procedures. The simple lipids included aliph. hydrocarbons, steryl esters, glycerides, and at least 9 different

sterols,

all thought to be derived from the diet. Free fatty acids, previously considered to be major components of worm lipids, comprised only 0.3% of the total lipid wt. Phospholipids included (in order of relative abundance) phosphatidylcholine, phosphatidylethanolamine, phosphatidylserine, and phosphatidylinositol, as well as sphingomyelin. Glycolipids included cerebrosides and sulfatides contg. both glucose and galactose, and gangliosides contg. glucosamine and sialic acid. The

fatty

acid compns. of these lipid classes appeared to be a mixt. of what are considered typical plant, bacterial, and animal acids. Several fatty acids found in the worms, including *cis*-vaccenic and **eicosapentaenoic** acids, were essentially absent from the dietary components, and it is concluded that these acids were synthesized in the worms. The earthworm derives much of its lipid adventitiously, but

exerts

at least some control over its tissue lipid compn.

IT 19044-06-5 23929-42-2

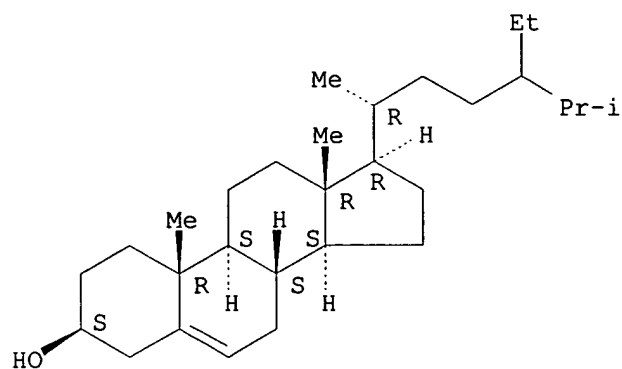
RL: BOC (Biological occurrence); BIOL (Biological study); OCCU (Occurrence)

(of earthworm)

RN 19044-06-5 CAPLUS

CN Stigmast-5-en-3-ol, (3.beta.,24.xi.)- (9CI) (CA INDEX NAME)

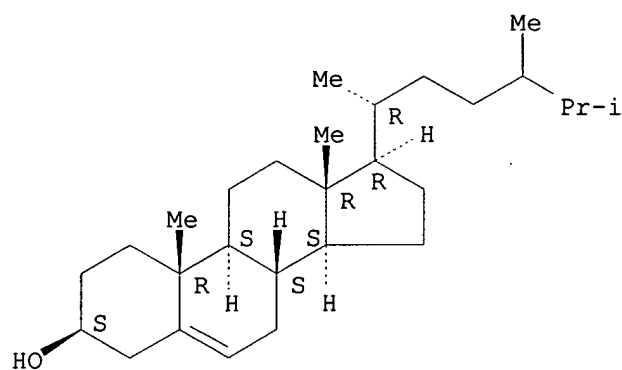
Absolute stereochemistry.



RN 23929-42-2 CAPLUS

CN Ergost-5-en-3-ol, (3.beta.,24.xi.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> D BIB ABS HITSTR 18

L45 ANSWER 18 OF 22 CAPLUS COPYRIGHT 2000 ACS

AN 1989:618928 CAPLUS

DN 111:218928

TI Organic geochemistry of particulate matter in the ocean: the role of particles in oceanic sedimentary cycles

AU Wakeham, Stuart G.; Lee, Cindy

CS Skidaway Inst. Oceanogr., Savannah, GA, 31416, USA

SO Org. Geochem. (1989), 14(1), 83-96

CODEN: ORGEDE; ISSN: 0146-6380

DT Journal

LA English

AB Org. geochemists often use the occurrence of specific org. compds. in marine sediments as biomarkers to relate sedimentary org. matter to biol. processes in the overlying water column. However, org. matter undergoes many diagenetic changes during transport through the water column. Only

a small fraction of the org. matter produced in surface waters reaches the sea floor is incorporated into the sediments. This material is subject to

considerable transformation by heterotrophic organisms. The initial structures of individual compds. is altered and the proportion of various compds. and compd. classes changes as a result of varying stabilities. The results on the org. geochem. of suspended and sinking particles collected as part of the PARFLUX and VERTEX programs are summarized and results for amino acids, fatty acids, sterols, and steroidal ketones from the VERTEX project site north of Hawaii are presented.

IT 19044-06-5 23929-42-2, 24-Methylcholest-5-en-3.beta.-ol

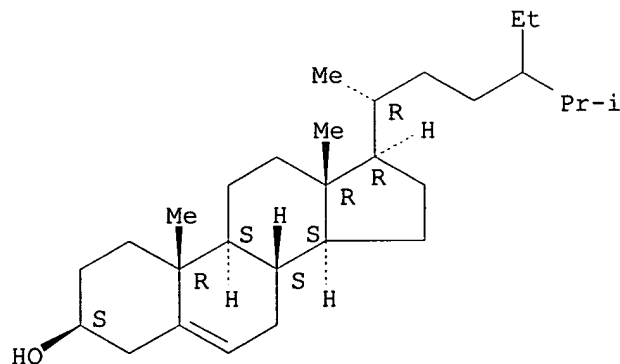
RL: OCCU (Occurrence)

(in particulate org. matter, in seawater and marine sediments, distribution and biogeochem. of)

RN 19044-06-5 CAPLUS

CN Stigmast-5-en-3-ol, (3.beta.,24.xi.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



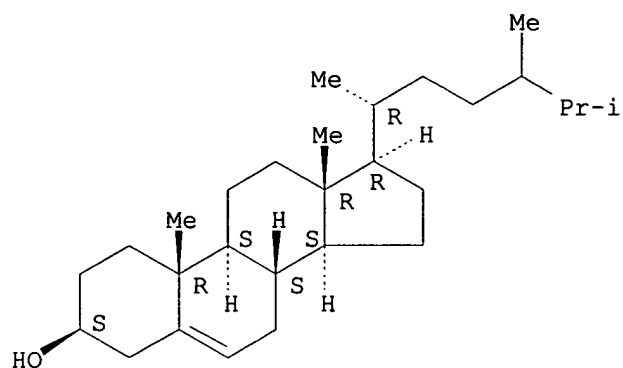
RN 23929-42-2 CAPLUS

CN Ergost-5-en-3-ol, (3.beta.,24.xi.)- (9CI) (CA INDEX NAME)

Searched by John Dantzman

308-4488

Absolute stereochemistry.



=> D BIB ABS HITSTR 19-24

L45 ANSWER 19 OF 22 CAPLUS COPYRIGHT 2000 ACS

AN 1989:493576 CAPLUS

DN 111:93576

TI Fatty acids and sterols of selected hyphochytridiomycetes and chytridiomycetes

AU Weete, J. D.; Fuller, M. S.; Huang, M. Q.; Gandhi, S.

CS Coll. Sci. Math., Auburn Univ., Auburn, AL, 36849, USA

SO Exp. Mycol. (1989), 13(2), 183-95

CODEN: EXMYD2; ISSN: 0147-5975

DT Journal

LA English

AB The fatty acids and sterols of 8 chytridiomycetes and 2 hyphochytridiomycetes and fatty acids of the oomycete *Pythium gracile* were analyzed by gas-liq. chromatog. In addn. to the fatty acids anticipated for fungi, the 2 hyphochytridiomycetes (*Hyphochytrium catenoides* and *Rhizidiomyces apophysatus*) and 4 of the chytridiomycetes (*Catenaria anguillulae*, *Blastocladiella emersonii*, *Monoblepharella* sp., and

Allomyces

macrogynus) contained arachidonic acid as a major fatty acid of the polar lipid fraction, and this fatty acid was detected as a minor component of *Rhizophlyctis rosea* and *Spizellomyces punctatum*. **Eicosapentaenoic** acid constituted 4.6% of the polar lipid fatty acids in *Monoblepharella* sp., and trace amts. were detected in several other species. Both the gamma (.omega.-6) and alpha (.omega.-3) isomers of linolenic acid were detected in all of the species analyzed. Cholesterol was the predominant (>73%) sterol of *B. emersonii*, *R. rosea*, *A. macrogynus*, and *Chytridium confervae* and a minor (<12%) component of *C. anguillulae* and *H. catenoides*. The major sterols of the other species included lanosterol (*C. anguillulae*, 45%), stigmasta-5,22-dien-3.beta.-ol (*H. catenoides*, 51%), 24-ethylcholesterol (*S. punctatum*, 38%; *H. catenoides*, 17%; *Monoblepharella* sp., 70%; and *R. apophysatus*, 84%), 24-methylcholesterol (*H. catenoides*, 23%; *R. apophysatus*, 14%; *S. punctatum*, 53%), and 24-methylene cholesterol (*Rhizophyidium sphaerotheca*, 51%). Neither ergosterol nor fucosterol was detected in any of the species studied.

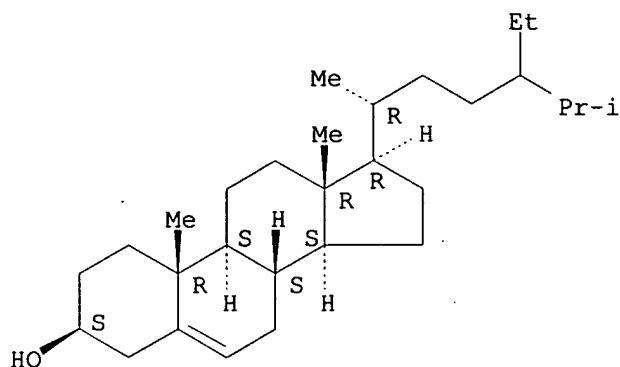
IT 19044-06-5, 24-Ethylcholesterol 23929-42-2,
24-Methylcholesterol

RL: BIOL (Biological study)
(of zoosporic fungi)

RN 19044-06-5 CAPLUS

CN Stigmast-5-en-3-ol, (3.beta.,24.xi.)- (9CI) (CA INDEX NAME)

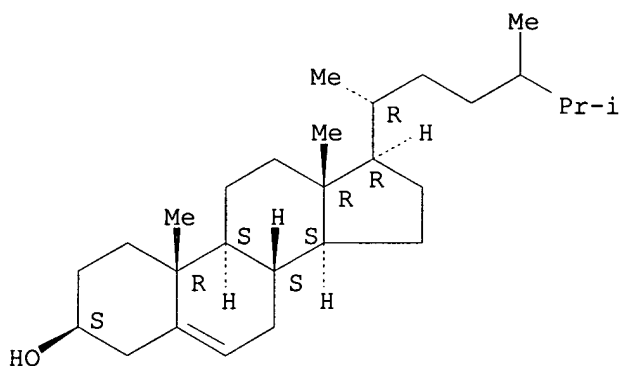
Absolute stereochemistry.



RN 23929-42-2 CAPLUS

CN Ergost-5-en-3-ol, (3.beta.,24.xi.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L45 ANSWER 20 OF 22 CAPLUS COPYRIGHT 2000 ACS

AN 1988:436802 CAPLUS

DN 109:36802

TI Nutritive values of shellfishes and fishes in the Ariake Sea. I. Content and composition of lipids of the bivalve Agemaki (*Sinonovacula constricta*)

AU Yanagita, Teruyoshi; Kurata, Mie; Inoue, Mariko; Tanaka, Hidenori; Enomoto, Noriyuki

CS Fac. Agric., Saga Univ., Saga, 840, Japan

SO Saga Daigaku Nogakubu Iho (1988), (64), 65-72

CODEN: SDNID7

DT Journal

LA Japanese

AB Agemaki contained about 2-3 g lipids/100 g wet wt., and 4 and 25% of the lipids contained sterols and phospholipids, resp. Cholesterol content was

only 50% of the total sterols and the remainder was mainly phytosterols such as .beta.-sitosterol. Anal. of phospholipid subspecies revealed a significantly high level of phosphatidylethanolamine (27-30%). Moreover, the fatty acid compn. of total lipids showed high contents of

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eicosapentaenoic acid 13-20% and **docosahexaenoic acid** (6-10%). There was a slight seasonal change in the compn. of lipid components.

IT **83-46-5, .beta.-Sitosterol**

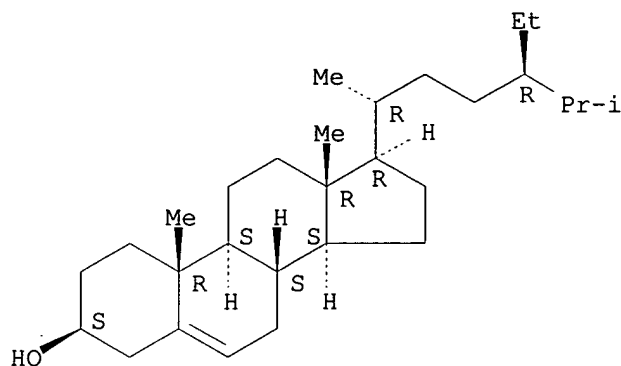
RL: BIOL (Biological study)

(of *Sinonovacula constricta* bivalves, of Ariake Sea)

RN 83-46-5 CAPLUS

CN Stigmast-5-en-3-ol, (3.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L45 ANSWER 21 OF 22 CAPLUS COPYRIGHT 2000 ACS

AN 1988:35138 CAPLUS

DN 108:35138

TI Seasonal changes in condition and lipids composition of the bivalve *Macoma*

balthica L. from the Gulf of Gdansk (southern Baltic)

AU Polak, Lucyna; Jarzebski, Andrzej; Wenne, Roman; Falkowski, Leonard

CS Inst. Oceanol., Pol. Acad. Sci., Sopot, 81-967, Pol.

SO Comp. Biochem. Physiol., B: Comp. Biochem. (1987), 88B(3), 881-5
CODEN: CBPBB8; ISSN: 0305-0491.

DT Journal

LA English

AB Seasonal variations in total lipid and lipid subclass contents, fatty acids, and sterols in *M. balthica* collected from 3 regions in the Gulf of Gdansk (1983-1984) are described. The obsd. variations were mainly related to energy storage during the spring and early summer and energy utilization in late autumn and winter.

IT **19044-06-5 23929-42-2, 24-Methylcholest-5-en-3.beta.-ol**

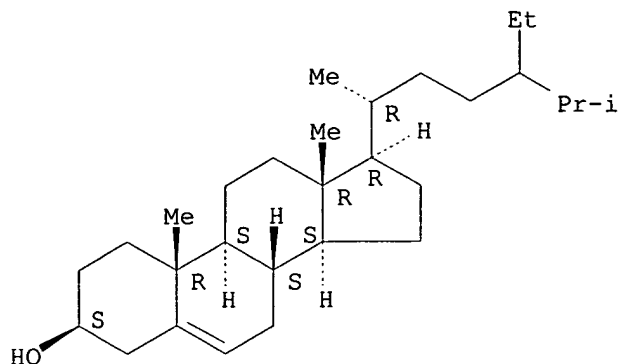
RL: BOC (Biological occurrence); BIOL (Biological study); OCCU (Occurrence)

(of bivalve mollusk, seasonal variations of)

RN 19044-06-5 CAPLUS

CN Stigmast-5-en-3-ol, (3.beta.,24.xi.)- (9CI) (CA INDEX NAME)

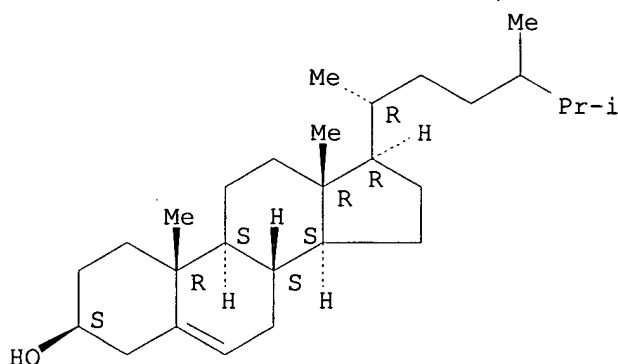
Absolute stereochemistry.



RN 23929-42-2 CAPLUS

CN Ergost-5-en-3-ol, (3.beta.,24.xi.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L45 ANSWER 22 OF 22 CAPLUS COPYRIGHT 2000 ACS

AN 1981:439376 CAPLUS

DN 95:39376

TI Fatty acids and sterol components of the rotifers cultured by a feedback system

AU Teshima, Shinichi; Kanazawa, Akio; Kamezaki, Naoaki; Hirata, Hachiro

CS Fac. Fish., Univ. Kagoshima, Kagoshima, 890, Japan

SO Nippon Suisan Gakkaishi (1981), 47(4), 515-21

CODEN: NSUGAF; ISSN: 0021-5392

DT Journal

LA English

AB The diurnal variation in fatty acids and sterols of rotifers (*Brachionus plicatilis*) was studied during feedback culture with baker's yeast and marine *Chlorella*. The rotifer contained abundant monoene fatty acids (50-60% of total fatty acids) at every sampling time, but the level of **eicosapentaenoic** acid (20:5.omega.3) was elevated after addn. of *Chlorella*. The sterol concns. showed no marked variation during feedback culture; the rotifer contained 24-methylcholesta-7,22-dienol and cholesterol as the major sterols.

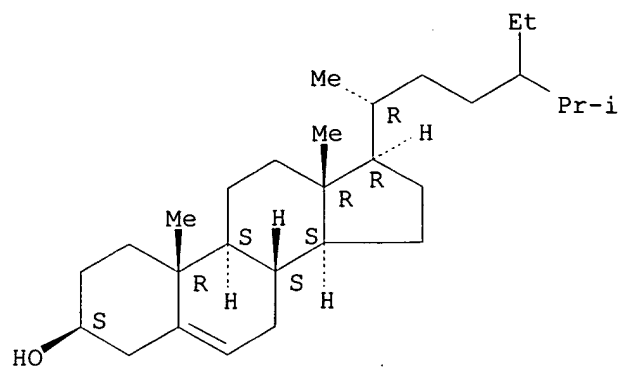
IT 19044-06-5

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308-4488

RL: BIOL (Biological study)
(of rotifer, in feedback culture with Chlorella and yeast)
RN 19044-06-5 CAPLUS
CN Stigmast-5-en-3-ol, (3.beta.,24.xi.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



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